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FINAL REPORT

PSRO AMBULATORY CARE QUALITY ASSURANCE REVIEW

VOLUME I. PROGRAM OVERVIEW AND DISCUSSION

NUMBER 5. SOUTHCENTRAL PENNSYLVANIA PROFESSIONAL STANDARDS REVIEW ORGANIZATION

BY

HEALTH CARE MANAGEMENT SYSTEMS, INC.

DECEMBER 1978

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ACKNOWLEDGMENTS

This report would not be possible without the dedication and cooperation of the many individuals working in the five PSRO demonstration projects. The descriptions and findings contained in the report are based in the experience of the five PSROs working in the complex and challenging environment of ambulatory care to establish feasible methods for PSRO ambulatory care review. Individual project participants in each of the PSROs are listed in the appropriate sections of Volume I.

HSQB personnel active in original project formulation and direction throughout the demonstration were: Michael J. Goran, M.D.; Leslie G. Ford, M.D.; P. Gregory Banks; Penni St. Hilaire; Dennis Siebert; and the current director, Helen L. Smits, M.D.

The HCMS technical advisory board contributed substantially to this project by offering their expert consultation and advice, not only to HCMS but to individual projects and HSQB. The advisory board consists of Robert H. Brook, M.D.; Ruth Covell, M.D.; Paul J. Sanazaro, M.D.; and H. Richard Nesson, M.D.

The report itself represents the results of the combined efforts of all HCMS staff members engaged in the demonstration project. Merle A. Ryland, M.S., project director, directed the work going into the preparation of the report and contributed major sections of the manuscript. He also was responsible for project liaison, technical assistance and was the strong coordinating force in the project. Nicole H. White, Ph.D., director of special projects, was responsible for early efforts to establish a conceptual framework for project assistance and analysis and

also provided active direction during the early stages of the project. She again took an active role in organizing and preparing major areas of the manuscript during the preparation of the final report. Charles Foreman, M.S., senior data analyst, was responsible for the time consuming and difficult task of compiling, organizing and presenting data included in all reports. His analytical skills and consistent attention to data quality have added greatly to the utility of this report. Melinda Alpaugh, M.P.H., Research Associate, played a major role in the project during the second year and contributed a substantial portion of the manuscript. Other HCMS professional staff contributed substantially throughout the project. Staff members include: Edward Carels, Ph.D., Research Director, Kwai Fong Chui, Ph.C., Research Associate, Leonard Hurst, Senior System Analyst and Consultant, Alan Kubrin, M.A., M.P.P., Research Associate, and Aquilo Lipscomb, M.A., M.S., Research Associate

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Principal Investigator

Health Care Management Systems, Inc.
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December, 1978

PREFACE

Although the Health Standards and Quality Bureau (HSQB) had previously funded several special projects in ambulatory care quality assurance, the Bureau initiated a systematic investigation of formal ambulatory care review programs in 1975. Findings of this investigation* highlighted the need for careful examination of alternative ambulatory care review approaches to determine their feasibility, especially in the PSRO environment.

In 1976, under the guidance of Michael Goran, M.D., former Director, HSQB, a demonstration program was initiated to further examine ambulatory care review methods within Professional Standards Review Organizations.

On July 1, 1976 a letter from HSQB was sent to all the PSROs inviting them to participate in an ambulatory care review demonstration project. These letters specified that "the demonstrations will be designed to assess various approaches to ambulatory care quality assurance in a variety of health service delivery systems with substantial variety in the method of obtaining a rational PSRO coordination approach for each project." Five demonstration projects were selected to participate in the demonstration project. Representing a variety of locations and proposed methods the five projects began formal planning activities in early October 1976. The demonstration projects are Central Massachusetts PSRO, Bronx PSRO, Southcentral Pennsylvania PSRO, Multnomah Foundation for Medical Care, and New Mexico PSRO.

At the same time as the demonstration projects were being selected an analysis contractor was selected to "assist PSRO in developing the demonstration protocols and be responsible for assessment and analysis

*Contract No. 240-75-0101, Bureau of Quality Assurance, Health Services Administration of the effectiveness of each of the demonstration projects in conjunction with the PSROs." Health Care Management Systems, Inc. (HCMS) has performed as the ambulatory demonstration analysis contractor since July, 1976. HCMS was also involved in a three-year grant program funded by The Robert Wood Johnson Foundation to examine ambulatory quality assurance programs with special emphasis on information systems. Some funding provided by the Foundation grant was used to give a private perspective to the government-funded demonstration project and to synthesize results of the project with other ambulatory care quality assurance research and evaluation programs in which HCMS was engaged.

This report on the development of ambulatory care review methods in the five PSROs demonstration projects is in partial fulfillment of the analysis contract requirements. The report includes two volumes and two appendices:

Volume I: Program Overview and Discussion
Section 1: Bronx PSRO
2: Central Massachusetts PSRO
3: Multnomah Foundation for Medical Care
4: New Mexico PSRO
5: Southcentral Pennsylvania PSRO
Volume II: Policy Recommendations and Technical Guidelines
Appendix 1: Interim Report - Cooperative Demonstration and Analysis of Ambulatory Care Quality Assurance Review Methodology in PSRO Settings - November 1977
Appendix 2: Ambulatory Medical Care Quality Assurance 1977 Conference Proceedings, La Jolla Health Science Publications, La Jolla, California 1977

Project overviews and data for each of the demonstration projects are documented in Volume I. This volume is especially useful as examples of ambulatory care review developmental efforts in PSRO. Volume II, "Policy Documentation and Technical Guidelines" are directed to HSQB and other agencies involved in medical care quality assurance and utilization review in a regulatory environment. The appendices include the Interim Report which describes the first year demonstration project activity and findings. The second appendix is a book containing papers presented at a two-day national conference on ambulatory care quality assurance. The entire report is designed to assist organizations searching for feasible ambulatory care review alternatives.

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SECTION I

INTRODUCTION AND PURPOSE

Assessment activities conducted in each of the five Professional Standards Review Organization (PSRO) ambulatory review projects were concentrated in several areas: a) description of project administration, b) description of activities in the areas of planning and administration, topic selection, criteria development, data collection, data processing, review and decision making, feedback and intervention, and restudy, and c) description of resources expended to accomplish the project's goals.

The general objectives of this final report are to:

1. Summarize the PSRO activity by presenting a variety of descriptive documentation (Volume I).
2. Document findings of investigation of review techniques employed by each PSRO (Volume I).
3. Guide future technical assistance conducted by HSQB (Volume II).
4. Provide recommendations regarding implementation of ambulatory care review systems by current and future PSRO demonstration projects (Volume II).

Presented in this volume first is a brief program overview designed to acquaint the reader with each PSRO project. If more in-depth information is desired, either the site itself or HCMS can provide a more detailed description. The next three sections describe activities that occurred at each project and the results of these activities. Finally, the last section presents resource data for each PSRO site.

Of the five PSROs funded in the demonstration program, four are initiating ambulatory care review systems where no prior system existed. They are: Central Massachusetts PSRO, Bronx PSRO, Southcentral Pennsylvania

PSRO, and Multnomah Foundation for Medical Care. The fifth demonstration program, New Mexico PSRO, has operated a claim-based review system for several years under contract with the State Medicaid agency. The New Mexico PSRO demonstration has explored some specific review questions, most of which were research oriented.

HCMS data collection for this report has continued since the beginning of the demonstration project. Each project has cooperated in providing many different types of data including questionnaire information, counts of activities, computer run sheets, personnel hourly activity description, minutes of meetings, and written project reports. The cut-off date for data was August 31, 1978, except for resource data which was discontinued on June 30, 1978. Therefore, the most recent activities of each project are not reflected in this report. The reader should be aware that this report does not attempt to describe the entire data base of each project; the activities and data described are meant to be representative of the operations of each demonstration project.

SECTION II

PROGRAM OVERVIEW

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PREFACE

Southcentral Pennsylvania PSRO (SCPPSRO) was awarded a contract by the Health Standards and Quality Bureau (HSQB) to implement an ambulatory review program over a two-year period. The initial contract was extended for 9 months. SCPPSRO was required to implement office audits in a number of group practices and to conduct research comparing data and review results of the office audits with Medicare Part B claims data. The project's broad objective was to test and implement a review capability which uses Medicare claims review as a screening device for identifying physicians or cases requiring more in-depth office audit.

SCPPSRO enlisted the participation of 109 physicians in ten ambulatory care settings (seven small family practices, three hospital based practices) and obtained the cooperation of the Medicare carrier, Pennsylvania Blue Shield (PBS). The office audit was conducted independently of Blue Shield's development and review of claim files for each participating practice with the objective of subsequently matching patients and physicians from the claim and office review. SCPPSRO negotiated a contract with PBS to process the office data and complete the comparison of claim and office audit results.

SCPPSRO developed two planning documents during a four-month period at the beginning of the project after HSQB approval of the initial concept paper.

PROJECT ADMINISTRATION

The SCPPSRO Board of Directors maintains overall responsibility for the demonstration program. Figure 1 is an organizational chart which depicts the functional relationships between the PSRO Board of Directors and the numerous organizational units of the project.

In the early planning stages of the project, the Ambulatory Care Review Operations (AMCRO) Task Force was formed which consisted of the following representatives:

1. PSRO President and Ambulatory Demonstration Project Director
2. PSRO Executive Director
3. Two supervising physicians for the office audit
4. Vice President of PBS
5. Project Manager of Research, PBS

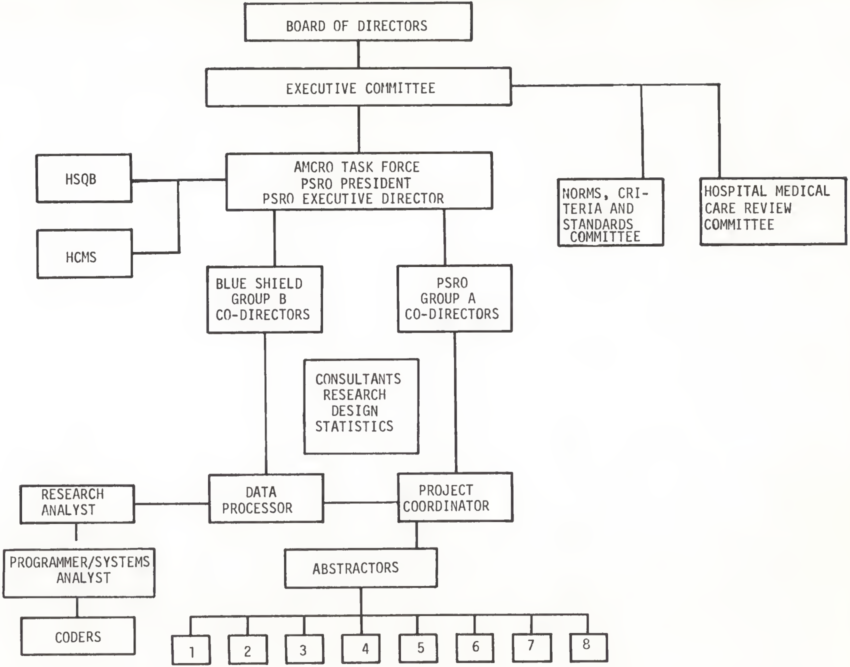
The AMCRO Task Force was the primary administrative and organizational unit and implemented the ambulatory care review system, including performance of the following tasks:

1. Development of the demonstration plan
2. Approval of all criteria
3. Development of the integration format (the data base, critical elements, and decision-making format)
4. Development of a case identification and data collection procedure
5. Coordination and integration of office and claim based data
6. Development of review results

The Southcentral Pennsylvania PSRO Board of Directors and Executive Committee preside over the AMCRO Task Force.

FIGURE 1

SOUTHCENTRAL PENNSYLVANIA PSRO ORGANIZATION



BOARD OF DIRECTORS
EXECUTIVE COMMITTEE
HSQB
HCMS
AMCRO TASK FORCE
PSRO PRESIDENT
PSRO EXECUTIVE DIRECTOR
NORMS, CRITERIA AND STANDARDS COMMITTEE
HOSPITAL MEDICAL CARE REVIEW COMMITTEE
BLUE SHIELD GROUP B CO-DIRECTORS
PSRO GROUP A CO-DIRECTORS
CONSULTANTS RESEARCH DESIGN STATISTICS
RESEARCH ANALYST
DATA PROCESSOR
PROJECT COORDINATOR
PROGRAMMER/SYSTEMS ANALYST
ABSTRACTORS
CODERS
1
2
3
4
5
6
7
8

After formation of the AMCRO Task Force, a management plan was developed which divided the project into two major elements under separate co-directors. The Group A segment refers to activities and personnel involved in the PSRO office audit portion of the study while the Group B segment refers to the Blue Shield claim matching and interface activities as well as data processing.

The office audit is managed by two physician members of the Task Force (Group A Co-directors). Their responsibilities include:

1. Development of critical criteria and elements of care for each topic
2. Design of the format for data collection
3. Specification of data displays
4. Review and analysis of data
5. Design of feedback study practices

Claim screening and integration is managed by the Medicare carrier representative to the project (Group B Co-director) who is primarily responsible for delineating data requirements and data collection efforts and overseeing all activities related to screening functions performed by Blue Shield.

The PSRO employed a review coordinator who was responsible for the daily management of the project. This person worked closely with physician supervisors and PBS personnel and was responsible for training and managing the abstractors who collected office data.

At each practice site, one abstractor was responsible for all data collection. The abstractors reported directly to the review coordinator who also worked with practice personnel in collecting information.

While task force members and staff reported to the project director, the management of the project was characterized by frequent interaction among project staff, with informal reporting guidelines. The Group A co-directors were the primary interface between the PSRO and the participating practices. Each practice had an appointed representative to work with PSRO staff on review activities.

The HSQB analysis contractor acted as an ongoing consultant to the project. Other advisory groups and consultants included a project design specialist, a computer systems analyst, a biostatistical consultant, and the Pennsylvania Medical Care Foundation.

The SCPPSRO Executive Director was responsible for monitoring the project's fiscal affairs and for overall coordination of administrative matters.

TECHNICAL COMPONENTS

A. Selection of Topics for Review

The Group A co-directors, who had been active in ambulatory review in the PSRO area for several years, supervised the topic selection process. The co-directors selected eight review topics based on frequency data from two large family practices whose general utilization patterns were felt to reflect those of other family practices in the area. The topics chosen included preventive care (adult), arthritis, chest pain, urinary tract infection, anxiety and depression, chronic ischemic heart disease, hypertension and diabetes mellitus. The Task Force reviewed the topics and frequency data, and approved the initiation of criteria development for the selected topics. The project was not designed to determine whether problems existed in treatment of the topics prior to their selection, but it was felt that high frequency was an adequate criterion on which to base topic selection.

Blue Shield staff gathered claim review data on the same topics that were audited in the office practices, with the exception of two topics for which Blue Shield could not gather data (preventive care - adult, and anxiety and depression).

In addition to topic selection, a number of factors required consideration in the selection of sites and providers for review. The criteria for selection of the ten participating sites clearly reflect the voluntary nature of the project:

1. Demonstrated interested in ambulatory care review
2. Recognized competence in providing ambulatory care
3. Location within Dauphin and Lancaster Counties
4. Willingness to participate in project activities

There was also an attempt to obtain some diversity in practice styles, record keeping systems and practice size. The ten practices furnished estimates of the total number of patient visits in an eight-month period. Then, using available diagnosis-specific data, estimates of frequency of visits for the eight review topics were made for all of the practices. Each office designated both an administrative and a medical person to be responsible for relating to the PSRO regarding project activities.

B. Criteria Development

Some of the criteria sets used for the project were adapted from existing criteria being used to review ambulatory services at Hershey Medical Center and in the outpatient department of Lancaster General Hospital. The remainder of the criteria sets were developed by the AMCRO Task Force. Participating practice sites had the opportunity to review and comment on the critical criteria. Final review revision and approval of all critical criteria and elements of care was the responsibility of the Norms, Criteria and Standards Committee of PSRO.

Each criteria set included an extensive list of medical procedures for each diagnostic topic and a subset of critical criteria for use in the analysis and review (see Appendix A: SCPPSRO Critical Criteria and Ambulatory Care Data Base). The critical criteria included between 4 and 8 processes and other indicators per topic. These items were considered by the PSRO to have a major impact on the quality of care, and to a lesser extent, on the cost of services provided. The elements of care included processes and procedures commonly used in office based practice for the care of the particular diagnosis and also encompassed demographic data, diagnoses, laboratory data, medications, referral status, and clinical values.

Each set of critical criteria contained at least one potential outcome measurement. One subobjective of the review was to examine the relationships between the performance of the elements of care, the critical criteria, and the outcome criteria. Although there was a mix of acute, chronic, and preventive care topics, the criteria sets were similar in terms of the type and amount of data required for each topic. The diverse types of topics did affect time frames for data collection, however, requiring varying abstracting periods as shown in Table 1.

TABLE 1. SCPPSRO TOPICS AND TIME FRAMES

TOPIC	TIME FRAME
Hypertension	2 years
Preventive Care	7 months (6 months prior to exam and one month after exam
Diabetes	2 years
Anxiety/Depression	2 years
Chest Pain	8 months (6 months prior to diagnosis and 2 months after)
Arthritis	2 years
Urinary Tract Infection	4 months (2 months before diagnosis and 2 months after)
Chronic Ischemic Heart Disease	2 years

C. Data Collection and Processing

The PSRO briefly reviewed the record keeping system of each practice prior to data collection and requested the practices to begin listing patients (cases) for each of the selected diagnoses beginning January 1, 1977. Patients were identified by physicians or by office personnel, using either automated or manual techniques for capturing cases. Cases were recorded in a patient identification log which was designed by SCPPSRO, and used to suit the conventions of the particular site. At the same time, Blue Shield began coding primary diagnoses on all claims from the practices to capture cases by ICDA code for the subsequent interface activities (preventive care and anxiety/depression excepted).

The Group A co-directors and audit coordinator worked in conjunction with the computer systems analyst to determine the format for data collection. Detailed abstracting instructions and training materials were developed for the abstractors which minimized the amount of decision making or interpretation required in abstracting.

A number of procedures and checks on abstracting were implemented to assure accuracy and resolution of any problems in the data collection process. The PSRO abstractor used the patient identification log to locate and retrieve charts, and maintained an abstract control register for all cases abstracted. Abstracted records were color coded by study topic to prevent reabstracting for the same topic at a future date. Cases with multiple primary diagnoses encompassing more than one study topic were included under each study but abstracted separately. Abstractors submitted activity reports and problem logs and were closely supervised by the review coordinator. Reabstracting of samples of patient records was performed on a regular basis to assure reliability. To illustrate the entire data flow of the project, HCMS developed a diagram (Figure 2) which emphasizes the case selection and abstracting process.

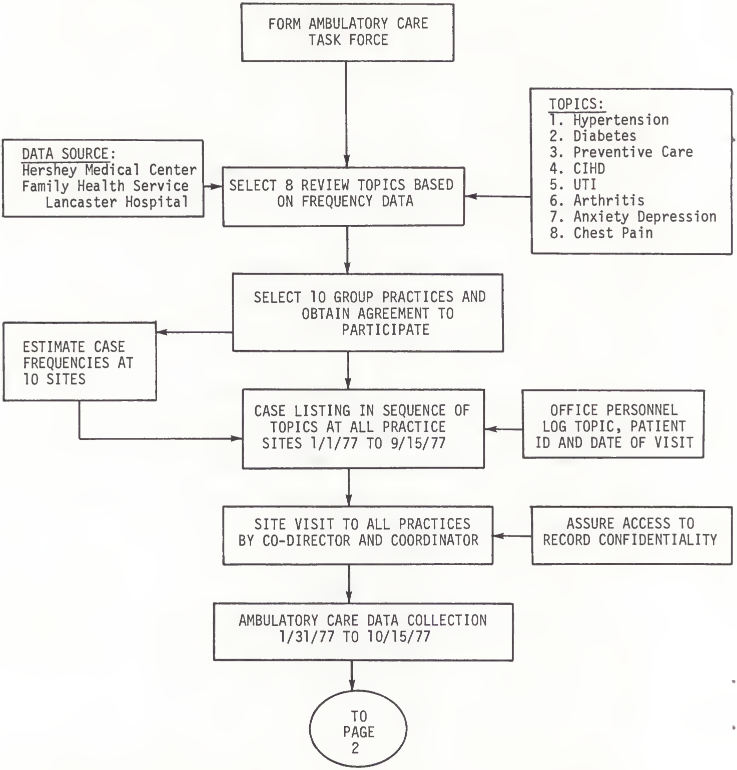
The abstracting process involved direct numerical coding for data processing of all data items relevant to the critical criteria and process elements for each ambulatory visit within the study time frame. Most of the elements of care were categorized within one of ten major coding classifications as follows:

1.	001 - 099	Diagnostic Process Ordered
2.	100 - 199	Therapeutic Modalities
3.	200 - 299	Assessment (Diagnosis)
4.	300 - 399	Outcome
5.	400 - 499	Subjective Findings (Symptoms)
6.	500 - 599	Diagnostic Process Performed
7.	600 - 699	Type of Encounter with Patient
8.	700 - 799	Patient Education
9.	800 - 899	Patient Disposition (referral, reappointment interval)
10.	900 - 999	Physician Recognition of Abnormal Laboratory Values

Abstracting instructions and forms were pilot tested for two weeks prior to settling on procedures in all practices. The PSRO instituted a quality control system for data collection involving periodic reabstraction

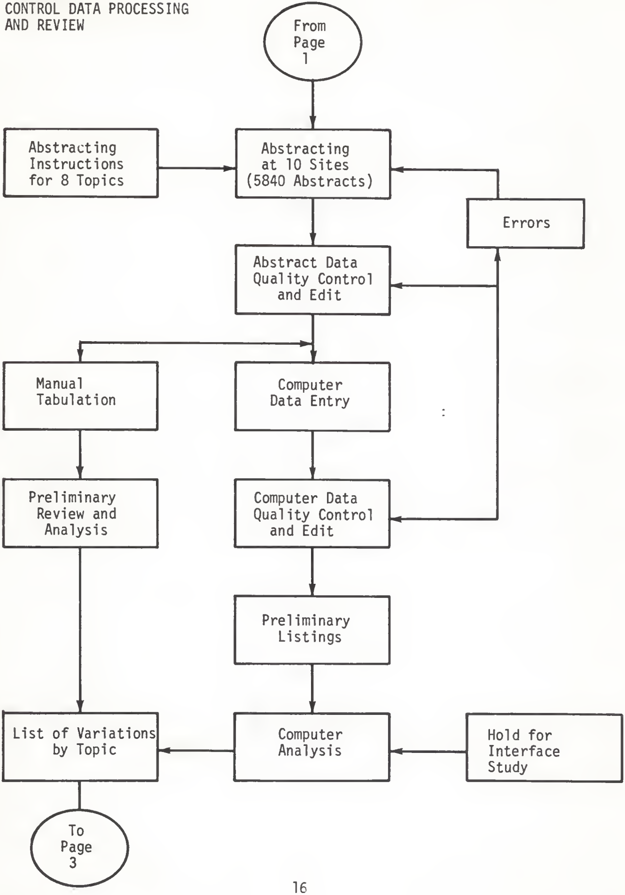
FIGURE 2

SOUTHCENTRAL PENNSYLVANIA PSRO DATA FLOW CASE SELECTION


FORM AMBULATORY CARE TASK FORCE
DATA SOURCE:
Hershey Medical Center
Family Health Service
Lancaster Hospital
SELECT 8 REVIEW TOPICS BASED ON FREQUENCY DATA
TOPICS:
1. Hypertension
2. Diabetes
3. Preventive Care
4. CIHD
5. UTI
6. Arthritis
7. Anxiety Depression
8. Chest Pain
SELECT 10 GROUP PRACTICES AND OBTAIN AGREEMENT TO PARTICIPATE
ESTIMATE CASE FREQUENCIES AT 10 SITES
CASE LISTING IN SEQUENCE OF TOPICS AT ALL PRACTICE SITES 1/1/77 TO 9/15/77
OFFICE PERSONNEL LOG TOPIC, PATIENT ID AND DATE OF VISIT
SITE VISIT TO ALL PRACTICES BY CO-DIRECTOR AND COORDINATOR
ASSURE ACCESS TO RECORD CONFIDENTIALITY
AMBULATORY CARE DATA COLLECTION 1/31/77 TO 10/15/77
TO PAGE 2

SCP DATA FLOW (CONT'D)

PAGE 2 ABSTRACTING QUALITY CONTROL DATA PROCESSING AND REVIEW

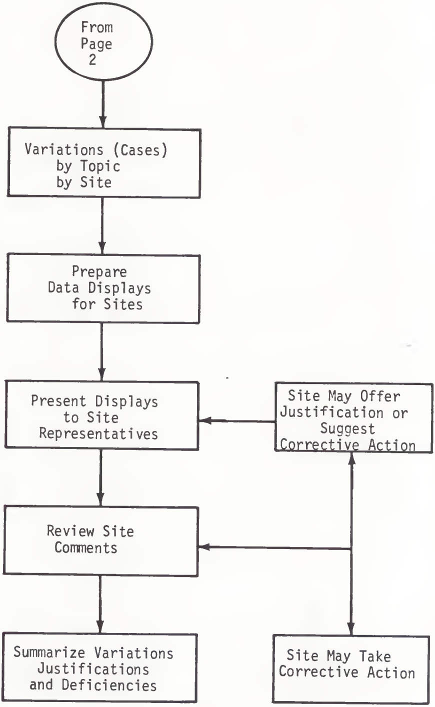

From Page 1
Abstracting Instructions for 8 Topics
Abstracting at 10 Sites (5840 Abstracts)
Errors
Abstract Data Quality Control and Edit
Manual Tabulation
Computer Data Entry
Preliminary Review and Analysis
Computer Data Quality Control and Edit
Preliminary Listings
List of Variations by Topic
Computer Analysis
Hold for Interface Study
To Page 3

SCP DATA FLOW (CONT'D)

PAGE 3 FEEDBACK

Site Intervention Dates

1. Hypertension
   1/78
2. Diabetes
   2/78
3. Preventive Care
   3/78
4. Chronic Ischemic Heart Disease
   4/78
5. Urinary Tract Infection
   6/78
6. Arthritis
   6/78
7. Anxiety/Depression
   6/78
8. Chest Pain
   6/78


From Page 2
Variations (Cases) by Topic by Site
Prepare Data Displays for Sites
Present Displays to Site Representatives
Site May Offer Justification or Suggest Corrective Action
Review Site Comments
Summarize Variations Justifications and Deficiencies
Site May Take Corrective Action

of samples of records which yielded a high reliability rate.* Data collection was carried out for each topic in sequence for a period of eight months. A total of 5,844 cases were abstracted for all topics combined. Frequencies of cases reviewed by site and by topic are discussed in the next section of this report.

The office audit data was keypunched to tape by the Blue Shield Data Entry Department. Computer edits identified nonsense dates and codes and duplicate process codes, and checked for the presence of clinical values and the completeness of vital fields. After editing data displays were produced, including:

1. Patient profiles
2. Critical criteria summaries for each practice
3. Summary of process elements by patient
4. Frequency distribution of process elements by physician
5. Summary of frequency distributions of process elements by site
6. Summary of frequencies of process elements by physician

Reduction of data and preparation of data displays was done manually by abstractors, using machine-generated frequency data.

Data processing for the claim based component proceeded concurrently. Blue Shield produced the following data displays as the claim data base was collected:

1. Summaries of diagnoses at the participating practices
2. Two-year patient histories from claim files
3. Practice summaries

---

*Reabstracting of hypertension cases resulted in a reliability rate of 95.6% as reported by SCPPSRO.

Interface activities required both automated and manual analysis. Matching of patients between the audit and PBS claim file was the first step, involving computer matching of dates of service and manual review of procedures on a case-by-case basis, to determine true matches. The matching technique was pilot tested during the second project year, but major interface efforts, including comparing AMCRO interface profiles to PSRO areawide profiles, were scheduled for completion during the project extension period following the second project year.

The following analyses will be required to examine the relationship between critical criteria and elements of care.

1. Simple correlations between all possible pairings of criteria and variables
2. Quantification of correlations (ANOVA and cluster analysis)

The correlation studies will be undertaken to define elements for the claim system which are predictors of quality care, as well as to form the basis of a refined criteria set for in-depth office audit. The data used in analysis are discussed further in the following sections of this report.

Frequencies of data elements from a 5% sample of office audit data were computed by HCMS to determine data availability for process elements associated with the critical criteria as well as for elements not associated with them. The summaries provide an indication of the proportion of data elements which were used consistently in feedback (elements associated with the critical criteria) as well as the overall proportion of data elements which provided some information yield. Data availability studies are discussed later in this report.

D. Data Analysis, Review and Decision Making

The initial responsibility for reviewing data relating to the in-depth office audit rested with the Group A co-directors, who utilized consultants as necessary. The results of the reviews were submitted to the AMCRO Task Force for analyzing findings and comparing results. Displays produced for review which were also used for intervention included:

1. Age and sex distributions
2. Variations by physician for critical criteria
3. Elements of care frequencies
4. Elements of care frequency ranking relative to other sites
5. Other data displays relevant to topic (e.g., clinical values were reviewed for hypertension)

The basis of the review component was determining compliance with critical criteria and thus identifying physician and practice variations. Ranking of sites for performance of each process element was used as a simple means of identifying potential over- and underutilization. For certain topics, the PSRO related critical criteria to associated procedure elements or performed special analyses of selected procedures where considerable variation was found.

E. Intervention

The variation rates and performance rankings were presented to each practice in sequence by topic. For the first topic, hypertension, the intervention was conducted by means of individual site visits. For all subsequent topics, review data was presented at joint meetings of site representatives. The PSRO discussed the results, including performance on critical criteria, variations and practice rankings for process elements, and special studies conducted for each topic. The PSRO did not recommend corrective action strategies to the practices but left specific decision making up to the practices themselves. A copy of intervention materials for the topic Chest Pain is found in Appendix B.

Practice response checklists were distributed to the practice representatives to solicit justifications for variations or agreement on variations, signifying a consensus on true deficiencies. The form also requested information on the mode of corrective action adopted by the practices in response to variations in critical criteria.

The project, as designed, made no attempt to control the intervention process after the PSRO staff presented the data. No format for variation analysis was imposed, and as a result, variation analysis and deficiency determination were subjective decisions made by one or more physicians in each practice site. Standards for this process varied widely across practices and within many of the practices. In many cases the variation analysis was done on a subset of patients. These patients were not selected randomly but on the basis of their cases being potentially the most significant and productive. Thus, the results of the analysis could not be extrapolated to the entire practice sample. Justifications in the variation analysis were not defined as a part of the feedback design since individual providers were not identified.

After intervention for each topic, relogging of study cases began at the practices in preparation for the restudy cycle. Analysis of restudy cases was not completed within the two-year project time frame, but will be done during the extension period.

SECTION III

ANALYSIS OF DESIGN AND PLANNING

INTRODUCTION

In an effort to identify the requirements essential for developing a Professional Standards Review Organization (PSRO) ambulatory care quality assurance capability, Health Care Management Systems, Inc. (HCMS) developed and administered two questionnaires to PSRO ambulatory care review system personnel participating in the demonstration program. The information gained from the questionnaires is intended for use by federal officials and PSRO leadership in highlighting design, planning and operation activities that must be accomplished in establishing the foundation for a successful ambulatory review program.

The First Year Questionnaire: Planning

The questionnaire covered four major planning areas: 1) development of the basic conceptual design of the review system, 2) project management (e.g., formation and responsibilities of the project management committee and project staffing requirements), 3) demonstration project relationships with other PSRO organizational units (the PSRO Board and standing committees), and 4) relationships with groups and organizations external to the PSRO (PSRO members and providers associated with the demonstration project as volunteer participants, consultants, and the analysis contractor). The methods used to construct, administer, and analyze the questionnaire are reported on pages 8-12 of Appendix 1, "Interim Report Cooperative Demonstration and Analysis of Ambulatory Care Quality Assurance Review Methodology in PSRO Settings." Data was analyzed across all PSRO projects and findings reported below reflect the opinion of aggregated demonstrated project participants.

The Second Year Questionnaire: Design and Operations

The second questionnaire focused more specifically on the actual success of each site's project design and resultant operation. A substantial number of items were aimed at management and administration issues. Other items questioned resources and funding and methods for topic selection, criteria development, data collection and processing, review and decision making, and intervention. The questionnaire was divided into two sections. Whereas the first year questionnaire was analyzed across all PSRO projects, the second year questionnaire was analyzed both by individual project (Section I) and across projects (Section II). The findings from Section I are reported below; the findings from Section II are found in Volume II of this report.

SYNOPSIS OF FIRST YEAR FINDINGS

Twenty requisites and five additional elements for a planning process were extracted from interviews with 25 ambulatory care quality review system planners participating in five demonstration projects. Overall, 20 requisites (numbered) for planning were identified and five elements (E) came very close to meeting requisite criteria.

1. Involve the PSRo Board in the review of progress reports concerning ambulatory care quality assurance system activities.

E1. Prior approval of ambulatory care quality assurance objectives by the PSRO Board is essential to avoid committing resources to activities that are later abandoned.

Two respondents said that PSRO Board approval for their demonstration projects was obtained on the basis of little information on Board members' part. Since original approval of the project, according to ten respondents, the Board has not been active in project activities other than receiving reports, primarily at Board meetings. Health Standards and Quality Bureau (HSQB) required Board approval of PSRO participation in the demonstration program. The one PSRO which did not continue to participate in the program did not obtain prior Board approval. Two respondents from this project emphasized the need for Board agreement and approval of project objectives before the initiation of activities in order to avoid wasting resources.

2. Assure that all participants in review system design and operation (PSRO staff, PSRO consultants, the funding agency and the analysis contractor) have a complete and common understanding of PSRO ambulatory care quality assurance system goals, objectives and philosophy.

Eight respondents emphasized the need for all review system planners (PSRO professionals, staff and consultants to the PSRO) to have an early understanding of the goals. They felt this might keep activities peripheral to the goals from draining resources at a later date. One respondent emphasized the need to put the goals in written form to serve as an unambiguous reminder to all throughout the review system planning phase. Another thought that a common understanding was particularly important when the personnel from more than one organization are involved in project design and planning. Respondents also emphasized the need for a common understanding between project participants, the funding agency and the analysis contractor.

3. Attract a core individual or individuals to the review system to assure the continuing momentum of review system design.

Five respondents mentioned the necessity of involving a person or persons with both a well-formulated review system core idea and the time and dedication to devote to nursing that concept through the stages of review system planning. Such a dedicated leadership is required to provide continuity and assure continuing momentum, and particularly to refine the conceptual base of the review system as project planning progresses. These critical persons are required for assembling staff resources and for interaction with the various physician groups during the review system planning phase. One of the respondents said that as planning progresses and project staff other than core individuals begin to understand the details of the review system concept, the dependence of project planning on this core declines:

4. Attract to the review system planning team a medical leader whose opinion is valued by community physicians.

Four respondents emphasized that the involvement of a medical leader whose opinion is respected by community physicians and by all project planners was important to the planning phase. The medical leader's importance lies in his ability to coordinate the sometimes diverging perspectives of the various project planners. One person who speaks with authority is required to resolve potential conflicts and demonstrate to planners the wisdom of certain resolutions.

5. Define consultant role and tasks as specifically as possible to maximize consultant usefulness to review system planning.

Six respondents felt that consultants outside the PSRO could offer significant assistance to ambulatory care review system planners. Two respondents emphasized the need for the PSRO to specifically define the consultant's tasks and expectations early in the PSRO-consultant relationship.

Three review system planners provided suggestions on how to enhance the usefulness of the analysis contractor in his role as technical consultant during the planning process. While these respondents felt that the analysis contractor was quite helpful in identifying areas of the project that required clarification, they thought that the contractor should have taken a more active role in helping the planners to resolve these issues. While these particular respondents did not specifically so mention, two others mentioned the need to clarify, at an early date, the role to be assumed by the analysis contractor, especially in the area of technical consultation.

6. Designate one review system planning team member to coordinate and rewrite planning documents, integrating sections produced by various other system designers.

7. Include on the review system planning staff one person at the full-time or nearly full-time level responsible for coordinating the technical activities for daily review system planning.

E2 It is useful to include on the review system planning team a person with skills in system design and knowledgeable in the daily operation of review system activities.

Six respondents saw the need to include a full-time or nearly full-time PSRO staff member to coordinate planning and manage eht operation of the review system; also, as one respondent mentioned, this full-time staff member is needed to attend to the time-consuming tasks and the myriad of details that arise in such an enterprise. Three respondents emphasized the importance of this person having skills in system design and management of day-to-day activities.

8. Emphasize to review system planners that planning activities are evolutionary and that they can expect testing and revision to continue beyond the initial drafting of a system design.

Seven planners mentioned the difficulty of producing planning documents that anticipated the future details of their proposed ambulatory care review systems. Five respondents mentioned that planning activities would continue beyond the planning phase and into the operational phase. They emphasized that it is impossible during the planning phase to anticipate all the contingencies that might develop in the operation of the review system. One respondent said that concept development is evolutionary, requiring modification as difficulties arise. Others said that alternative solutions to problems that are anticipated during planning can often only be investigated in an operational environment. Two respondents mentioned that while the general review system design and initial steps can be finalized during planning, the details must await operational activities. One respondent thought review system design might entail a trial-and-error process for certain problems.

9. Implement selected feasibility tests of the review system components to enhance planning prior to committing resources to larger-scale operational activities.

Nine respondents said that a feasibility test of some of the uncertainties, utilizing fewer records than the operational review system would later involve, would have been helpful. Commonly suggested review system components for feasibility tests were: 1) the abstract form, and 2) a determination of what data were likely to be found in the ambulatory record and might thus be included for quality review. Four of the nine respondents thought that a limited pilot study of the entire review system would have been helpful, although several viewed the demonstration project itself as a pilot study. The other five respondents felt that since a limited amount of time was provided for the demonstration project, a pilot study of the entire review system was not possible; that the preparation required for such a test was as extensive as was required for operating the actual demonstration review system and was, therefore, not an efficient use of project resources.

10. Make review system staff aware of the purpose and demands of planning in order that these demands do not dampen their enthusiasm.

E3. Specific deadlines for review system planning and planning documents tend to expedite those activities within busy PSROs.

Two respondents commented on a related issue, the effect that extended planning periods had on project staff. These respondents felt that staff enthusiasm for the demonstration project was jeopardized at times by an inability to investigate, in an operational setting, what everyone perceived were uncertainties concerning project design. One of these respondents as well as a third thought that project interaction with outside monitoring (HSQB and the analysis contractor) should be more intensive over a shorter period of time in order to produce an improved planning process and allow earlier testing of the review system design.

Responses varied concerning the amount of time allotted to writing planning documents. Four respondents felt that a sufficient amount of time was available for the production of the concept paper, the preliminary and the final plans. Six felt that they could have used more time. Three respondents mentioned the difficult and time-consuming tasks of integrating the concerns of everyone participating in project planning (staff, consultants, HSQB and the analysis contractor) into one coherent planning document. Three of those who felt that sufficient time was available for writing documents (planners who were not directly involved in the writing) thought that if more time had been allotted, the document writing would have consumed that time without producing plans of a higher quality or containing any more detail; these respondents felt that deadlines served the function of expediting organizational activities.

11. Include on a review system management committee representatives of those physicians whose ambulatory care will be reviewed.

E4 Inclusion of key physicians skeptical of ambulatory care quality assurance in management activities can help assure that their skepticism does not become opposition.

Each of the five PSROs participating in the demonstration project formed a management committee to oversee the planning and operation of their review systems. Five respondents mentioned the importance of including on that committee representatives of the physicians whose medical care would be reviewed so that a liaison could be established between the review system and the individual physicians. The liaison, a physician, would convey the concerns of his constituents to the PSRO, guaranteeing communication between the physician community and the ambulatory review system managers. Representatives from hospital staffs, according to the five respondents, can serve as the liaison between the PSRO and community physicians since most physicians are associated with a hospital. Two respondents mentioned that their review system management committee included a physician who had a skeptical attitude toward the review of ambulatory care and who was recruited for the committee to assure that his skepticism did not become opposition.

12. Indicate to planners that they should expect that PSRO members will express little desire to become involved in review system planning activities.

Seven review system planners said that although the PSRO general membership was notified, it expressed little desire to participate in planning activities. Several respondents were surprised that the physician community did not express more negative reactions concerning ambulatory review. Only one respondent stated that a "couple" of PSRO physicians responded by volunteering for project committees. Another respondent elicited little reaction from physicians even after his personal explanations of the project. Five respondents explained that notification usually occurred through the PSRO newsletter, although in two projects the PSRO annual meeting was also used to inform the membership. In either case only a general project description was provided.

E5 Inclusions of the PSRO membership in the design and operation of the ambulatory care quality assurance system should await its testing in order not to arouse premature opposition.

Nine respondents felt that it was premature at this time to involve the PSRO general membership in the details of the design and operation of the ambulatory care review system. These planners felt that the membership should not be involved until review was perfected and a well-developed and tested system could be presented to them. Two of these planners specifically mentioned the danger of arousing opposition to ambulatory review, opposition that would "muddy the waters" for the future and defeat ambulatory review before it had a chance to develop.

Sentiment on this point was not unanimous. One respondent felt that the benefits to be gained by increased membership interest in the PSRO and the ambulatory project were worth risking the potential opposition that might occur through such involvement. Another felt that should disharmony develop, project planning should include the "loyal opposition." Another respondent from the same project felt that as many physician groups as possible should participate in order to legitimize the project within the medical community.

13. Recruit from the review system and employ as representatives to the physician community those physicians with strong personal ties to the groups of physicians whose ambulatory care will be reviewed.

14. Identify local medical community opinion molders and enlist them as personal ambassadors from the PSRO.

Thirteen respondents emphasized that a critical factor in gaining physician participation in the demonstration project was a personal relationship between a physician representing the review system and the physicians whose ambulatory care was to be reviewed. In all the projects this personal relationship was one that had developed prior to the demonstration project. It was employed in obtaining physician volunteers for the project through letters, telephone calls and actual personal contracts. In the two projects associated with hospitals representatives of medical staffs were used to encourage physician participation in the demonstration project. Members of committees in one project were selected in large measure on the basis of their potential ability to gain the cooperation of physician volunteers. One respondent said that had physicians been asked anonymously to volunteer to have their ambulatory care reviewed they would have refused. The "peer pressure" implied by personal contact with a PSRO physician representative generated the cooperation. Two other respondents mentioned that securing the cooperation of physicians in their areas required repeated personal contact with the potential volunteers.

One project, in an effort to obtain the participation of one physician in a small group practice, actually obtained the participation of all members of that group through contact with the one group member. Five respondents saw the need for PSROs to identify the opinion molders in each locality who would serve as personal ambassadors from the PSRO to the physician and generate support for ambulatory care quality assurance activities. Permission to review the ambulatory care of physicians practicing in the outpatient department of a project hospital was secured through the hospital administration, and each individual physician did not need to be recruited.

15. Emphasize to the participating physician community that the review system will provide the physician with information useful to his practice.

Five respondents felt that one of the best methods of eliciting cooperation from volunteer physicians whose care will be reviewed is to agree to provide the physicians with feedback of review results. One respondent said that volunteers feel that review may be used to gain some knowledge about their practices without any expense on their part. Another felt that it was important to provide feedback as quickly as possible. The importance of providing positive as well as negative feedback to the physician was also emphasized. Some physician volunteers, according to one respondent, made the provision of feedback a condition for their participation.

16. Emphasize to those physicians whose ambulatory care will be reviewed by the quality assurance system that their early and willing cooperation will avoid the imposition of a system from outside the local medical community.

Fourteen respondents felt that an important factor in attracting volunteers to ambulatory review activities was the desire of the physicians themselves to become involved in a physician-led effort to establish ambulatory care quality assurance systems, thus avoiding nonphysician design of systems that may possibly have antithetical consequences for them. Two respondents specifically mentioned physicians' concern with the imposition of an unworkable system by the federal government, one not attumed to local needs. Two other respondents said that the PSRO emphasized to potential volunteers the opportunity to influence, through the demonstration project, the evolving federal policy toward ambulatory care quality assurance. One of these respondents informed volunteers of previous PSRO experiences in influencing policy.

17. Prepare system planners to expect that physicians whose care is being reviewed require few details concerning the technical operation of the review system during the planning phase.

Seven respondents mentioned that the physician volunteers requested general, not detailed, information concerning the proposed review system. This information was supplied to them in both written and verbal form. Two respondents from different projects mentioned that a personal contact session of only 10 or 15 minutes was necessary to explain project objectives and procedures, and few volunteers requested additional detail. One respondent mentioned that volunteers were more concerned with the degree to which review system activities would affect them than with the system's technical details. Another respondent said that volunteers were concerned about what the review system would cost them. Volunteers were interested in what criteria would be used in evaluating their ambulatory care. A respondent from a project associated with PSRO area hospitals confirmed that the hospitals were also interested in a general, and not a detailed, description of the proposed review system.

18. Prepare system planners to expect that physician volunteers whose ambulatory care is being reviewed will express little interest in participating in the design or the technical activities of operating the review system.

Six respondents said that the physician volunteers were not interested in participating in the design or operation of the ambulatory care review system. Five of these said that none of the volunteers expressed any desire to become involved. The sixth respondent said that a few did express a desire, while other physician volunteers offered suggestions. The majority of volunteers, however, were not interested in the technical details of the review system. One respondent felt that the physicians were comfortable in delegating this responsibility to their project representative. Another felt that they simply did not have the time for such activities and that some mechanism should be created to allow them the level of involvement that their time permits.

19. Assure that review system activities do not interfere with the physician's office routine.

Five respondents mentioned that physician volunteers concerned that review system activities might interfere with office routine. One potential volunteer decided not to participate in the demonstration project because of what he saw as potential disruption to his practice. Two respondents said that this project goal was to demonstrate that effective quality assurance systems can be developed and operated without interfering with office routine.

20. Assure the confidentiality of all physician and patient information.

Nine respondents mentioned that physician volunteers were concerned that the medical record data remain confidential. They were apprehensive about the potential dangers involved in breaching patient privacy by releasing information. Another concern was whether the physician maintained legal custody of the medical information and could release it for quality review activities without risking any patient-initiated legal consequences. One respondent said that volunteers were most concerned about the identification of the physician. Another mentioned that the PSRO anticipated the problem and had assured confidentiality of all data in the initial PSRO letter inviting physicians to participate in the project. Still another stated that this potential problem was mitigated by PSRO confidentiality policies. Two physician respondents felt that the confidentiality issue was not the real issue but was being used by some as an excuse for not participating in quality assurance activities.

SECOND YEAR FINDINGS

Method

Subjects and Questionnaire Development

The subjects for the survey were 87 persons who were involved in various aspects of the demonstration projects in the five sites. For analysis purposes, subjects were classified according to their role in the demonstration project (e.g., PSRO staff or physician, physician or nonphysician consultant, abstractor and other). Also, they were classified according to their level and type of involvement in the project.

The questionnaire was composed of two sections. The first section had 18 objective items where the respondent was requested to circle one of three answer choices which best described their position and then indicate the strength of their position along the continuum from strongly agree to strongly disagree. If respondents felt strongly about a question, they had the option of answering more than one choice.

The second section is comprised of a mixture of 22 open and closed questions. The bulk of these questions focus on describing the PSRO demonstration experience to provide technical assistance to new PSROs beginning ambulatory care review programs.

The questionnaire development began with staff review of over 150 articles, books, and papers on the topic of quality assurance. Each reference was read to extract relevant information on ambulatory care quality assurance. A listing of strengths and weaknesses in conducting ambulatory quality assurance was comprised. Special problems in the evaluation of ambulatory care were also noted within the literature.

HCMS' previous experience with ambulatory care quality assurance projects was then used to build a model for reviewing care rendered in the office setting. The model was comprised of three cycles: screening, action, and restudy. The components of the model consisted of such factors as selection of topics or providers, criteria development, review and decision making, and impact assessment.

From this model HCMS staff developed a list of issues being investigated within each site. These issue lists were site specific but gave a picture of the issues and problem areas facing each of the demonstration sites. From the issue lists a common thread of issues across all sites was determined. HCMS and HSQB staff discussions were also held to review the entire ambulatory care demonstration evaluation effort. Such discussions when combined with the issue lists and model tended to focus survey attention on the future of ambulatory care rather than objectively determining what each site did or didn't do and why.

From this process a list of 76 questions were developed. These questions were all open ended. In order to better quantify some of them and eliminate others, a sample of 32 questions was discussed face to face with a group of people working on the demonstration at one of the sites. HCMS staff reviewed the interpretations given to the questions as well as the responses. The interpretations and points of uncertainty displayed by PSRO personnel were then utilized by HCMS staff to revise the list of questions and convert others to objective (closed ended) questions. This process also assisted in determining relevance of questions as well.

A draft of the survey was prepared in late August, 1978. The HCMS staff critically reviewed the questions and a final draft was prepared on September 1, 1978. A letter soliciting cooperation support from Dr. Michael Goran of HSQB and a personal letter with directions for survey dissemination were mailed to each of the Executive Directors within each site. Each Executive Director was then requested to disseminate the survey together with a self-addressed stamped folder to each of the key people involved in the project. The list of people were derived after HCMS reviewed cost log voucher data from each site and confirmed each list of names with each Executive Director.

Complete packages of surveys and return envelopes were mailed to each Executive Director in the second week of September. A two-week turn around was requested in the letter which accompanied each of the surveys.

A series of follow-up calls from HCMS were required to obtain responses from each of the sites. After seven weeks, data analysis began and no more questionnaires were accepted.

The final response rate was 44 or 51%. The majority of those nonrespondents were physicians who served as consultants to the project in its beginning stages.

Data Analysis

For each individual project, responses in Section I of the questionnaire were tallied on a three-point scale; choices 1 and 2 (agree) and 4 and 5 (disagree) were collapsed. Since several items were mutually exclusive, if a respondent had conflicting responses indicating he did not understand the item, these responses were eliminated from the data base. From a total response rate of 1,274 the usable responses totaled 1,203. For each item, the response rate for agree, undecided, and disagree is reported.

Additional analysis examined differences between physician and nonphysician responses for those items where there was at least two responses in both the agree and disagree categories. The analysis included only those individuals who were classified as either a PSRO staff physician or physician consultant and a PSRO staff nonphysician, nonphysician consultant or subcontractor consultant. Also included were only those individuals who were rated as being involved in all or at least four phases of demonstration development.

Analysis of Section II of the questionnaire included reading the open-ended responses and synthesizing meaning into appropriate categories, depending on the nature of the question. The close-ended questions in Section II were tallied with no changes in the response categories.

DISCUSSION OF SURVEY FINDINGS (SECTION I)

Presented in Table 2, "Survey Items and Responses: Southcentral Pennsylvania PSRO" are the 18 questions along with the total responses per question. Thirteen questionnaires were sent to the PSRO and 11 were returned. The total responses were 306, 20 of which were not useable, leaving total useable responses of 286.

Respondents agree that their demonstration project is a research project as well as implementation of an operational review system (Item 1 and 2). They also believe that the PSRO should place little reliance on the work of others in establishing a review program since most of their concepts were self generated to accommodate the unique characteristics of their geographic area (Item 5). There was agreement that use of volunteer physicians participants introduces bias into research results and respondents were split on whether volunteer participants should be used in studies of ambulatory care quality assurance (Item 3).

In regards to project goals, respondents unanimously agreed that the purpose of a PSRO ambulatory care review system is to improve care rendered to patients as well as to help contain health care costs (Item 4). There was some disagreement on whether a review program should look at just those physician practice patterns which differ significantly from practice norms for each area or look at the entire mainstream of care. All agreed that it is not possible to say whether ambulatory care programs can be made cost effective and they must consider cost effectiveness if the PSRO program is to survive (Items 9 and 11). Respondents believe that review topics should focus on those areas which have the greatest potential for improving the patients health and be chosen according to data accessibility. There was less agreement on whether topics are best determined by physician members of PSRO peer review committees (Item 12). It is believed that non-physician services should be reviewed in the future however it may not be feasible immediately (Item 14). Respondents favor criteria which focus on over- and underutilization and believe that the ultimate goal of a review system is to develop standards and criteria, compare practice patterns to them, and then encourage compliance where variations exist (Items 17 and 18). Respondents believed that the technical assistance provided to them from outside their PSRO served their needs (Item 6).

The feasibility issue was raised in several questions. Respondents believe that ambulatory care review is feasible, however, there is disagreement as to whether it could be implemented on a nationwide basis. In particular, they believe that their approach is acceptable to physicians, however, are split on whether their approach could be used to review all physicians without much effort and modification of arrangements and procedures (Items 8, 13 and 15). Some respondents believe that more research is needed to determine the best approach to changing physician practice patterns, some that it is best to provide direct feedback to each practitioner being reviewed and one respondent believes that feedback is most effective when it is provided to groups of physicians (Item 10).

An additional analysis was conducted on those questions which showed disagreement among respondents. The items were analyzed where either two or more respondents appeared to disagree (e.g., at least two or more responses in the "agree" category and at least two or more responses in the "disagree" category). Analysis was conducted to determine whether disagreement may have occurred dur to difference of opinion between physicians and nonphysicians who had been heavily involved in the entire project. Respondents substantially disagreed on seven items (39%), however, analysis did not clearly indicate differences between the physicians and nonphysicians.

TABLE 2. SURVEY ITEMS AND RESPONSES:

SOUTHCENTRAL PENNSYLVANIA PSRO

1. a) Our demonstration is a research project wherein data collection will assist in performing subsequent ambulatory care studies.

TOTAL RESPONSES		
Agree	Undecided	Disagree
6	0	0

b) We are interested only in the development of an operational ambulatory care review system for improving quality of care rendered in our area.

TOTAL RESPONSES		
Agree	Undecided	Disagree
0	1	4

c) Our demonstration is a combination of research design and implementation of an operational review system. We believe one must conduct adequate front end investigation prior to implementation.

TOTAL RESPONSES		
Agree	Undecided	Disagree
6	1	1

2. a) In view of the problems in measurement, conducting research on ambulatory care is unlikely to produce meaningful results.

And

b) The prime emphasis of any PSRO should be on development of an operational quality assurance project, research is not likely to result in improved patient care in the practice settings.

TOTAL RESPONSES		
Agree	Undecided	Disagree
1	2	9

c) A PSRO must conduct research to better understand the problem before an operational program to resolve the program can be implemented.

TOTAL RESPONSES		
Agree	Undecided	Disagree
5	0	2

3. a) In our ambulatory demonstration project, the use of volunteer subjects has been invaluable. No study of ambulatory quality assurance could be completed without voluntary participants.

TOTAL RESPONSES		
Agree	Undecided	Disagree
3	0	3

b) Using physicians who volunteer their office data is a practical solution to a practical problem (obtaining practice data from a physician's office). In most instances, there is no other choice.

TOTAL RESPONSES		
Agree	Undecided	Disagree
3	2	3

c) The use of volunteers introduces a bias into the results of any study which limit the generalizability of the findings to the practices studied and reduces the potential for using results in HSQB policy development.

TOTAL RESPONSES		
Agree	Undecided	Disagree
4	0	1

4. The purpose of a well constructed PSRO ambulatory care review system is:

a) To improve the care rendered to all patients in its area.

TOTAL RESPONSES		
Agree	Undecided	Disagree
5	0	0

b) Change physician practice patterns which, in turn, would impact upon the care rendered to patients in the area.

TOTAL RESPONSES		
Agree	Undecided	Disagree
6	0	0

c) To improve the quality of care rendered to patients in the office setting as well as to help contain health care costs.

TOTAL RESPONSES		
Agree	Undecided	Disagree
7	0	0

5. a) In conducting an ambulatory care quality assurance demonstration, reliance on the research findings of others is useful but not mandatory.

And

b) PSROs beginning ambulatory projects should place little reliance on the work of others in establishing a review program, most of our concepts were self generated to accommodate the unique characteristics of our geographic area.

TOTAL RESPONSES		
Agree	Undecided	Disagree
7	1	1

c) It is necessary to conduct a complete literature search to review the findings of others prior to starting any research or demonstration project.

TOTAL RESPONSES		
Agree	Undecided	Disagree
1	0	2

6. a) Our staff resources were such that little or no technical assistance from outside the PSRO was needed.

TOTAL RESPONSES		
Agree	Undecided	Disagree
1	0	3

b) In launching an ambulatory care demonstration project heavy emphasis should be placed upon the expertise of various outside consultants for the first two years.

TOTAL RESPONSES		
Agree	Undecided	Disagree
2	3	1

c) The technical assistance provided through HSQB and HCMS served all of our technical assistance needs during the demonstration.

TOTAL RESPONSES		
Agree	Undecided	Disagree
5	1	0

7. a) The amount of seriously substandard ambulatory care cannot accurately be assessed based upon our demonstration experience thus far. It is too soon to tell.

TOTAL RESPONSES		
Agree	Undecided	Disagree
7	1	1

b) Substandard care in the ambulatory sector is pervasive and can be found to a greater or lesser degree in most office practices.

TOTAL RESPONSES		
Agree	Undecided	Disagree
0	3	0

c) From our experience thus far it appears that the degree of substandard ambulatory care is fairly low reflecting only a small percentage of physicians.

TOTAL RESPONSES		
Agree	Undecided	Disagree
1	3	0

8. a) Many illnesses treated in the ambulatory sector are ill defined, self-limiting conditions for which there are no clearly accepted therapeutic regimes. As such, review of ambulatory care is not feasible.

TOTAL RESPONSES		
Agree	Undecided	Disagree
0	1	3

b) Quality assurance in ambulatory care is no different than any other form of care, it exists in finite amounts and those amounts can be measured just the same as inpatient care can be.

TOTAL RESPONSES		
Agree	Undecided	Disagree
0	3	0

c) From our experience as an ambulatory demonstration site, it seems quite feasible to implement quality assurance programs for ambulatory care on a nationwide basis.

TOTAL RESPONSES		
Agree	Undecided	Disagree
2	1	3

9. a) An ambulatory quality assurance program should look at just those physician practice patterns which differ significantly from practice norms for each area.

TOTAL RESPONSES		
Agree	Undecided	Disagree
2	2	1

b) An ambulatory quality assurance program should look at the entire mainstream of care and seek to optimize the practices of as many doctors as possible.

TOTAL RESPONSES		
Agree	Undecided	Disagree
3	1	1

c) At this time, it is not possible to say whether ambulatory quality assurance programs can be made cost effective enough to review the entire spectrum of ambulatory care.

TOTAL RESPONSES		
Agree	Undecided	Disagree
7	0	0

10. a) Changing practice behavior is best achieved by direct practice pattern feedback to each practitioner being reviewed.

TOTAL RESPONSES		
Agree	Undecided	Disagree
4	3	0

b) Feedback comparing individual practices to a norm or standard results in physician defensiveness and resistance. The best way to change practice behavior is through education and general feedback to groups of physicians without individual comparisons.

TOTAL RESPONSES		
Agree	Undecided	Disagree
1	1	2

c) The best approach to changing physician practice patterns for purposes of quality assurance is not known at present, more research on this issue must be undertaken.

TOTAL RESPONSES		
Agree	Undecided	Disagree
4	0	0

11. a) Cost containment and quality assurance are totally mutually exclusive and cannot be dealt with simultaneously in ambulatory quality assurance efforts.

TOTAL RESPONSES		
Agree	Undecided	Disagree
1	1	2

b) The primary purpose of a PSRO quality assurance project is to improve patients care regardless of the cost implications.

TOTAL RESPONSES		
Agree	Undecided	Disagree
0	1	2

c) Ambulatory quality assurance while emphasizing improved patient outcomes must also consider cost effectiveness in patient care if the PSRO program is to survive.

TOTAL RESPONSES		
Agree	Undecided	Disagree
8	0	0

12. a) Ambulatory care review should focus on those topics which have the greatest potential for improving the patient's health.

TOTAL RESPONSES		
Agree	Undecided	Disagree
4	0	1

b) Review topics in ambulatory care must be chosen according to data accessibility, and frequency of occurrence in the primary setting.

TOTAL RESPONSES		
Agree	Undecided	Disagree
5	2	1

c) Review topics are best developed by focusing on specific practice problems determined by physician members of PSRO peer review committees.

TOTAL RESPONSES		
Agree	Undecided	Disagree
3	1	2

13. a) The approach we have used to conduct ambulatory quality assurance will be acceptable and feasible in conducting review for all physicians.

TOTAL RESPONSES		
Agree	Undecided	Disagree
2	7	0

b) Our demonstration approach is quite unique and unlikely to be duplicated to the point where it would be acceptable to physicians in other PSRO areas.

TOTAL RESPONSES		
Agree	Undecided	Disagree
0	1	5

c) The approach we used in conducting ambulatory quality assurance has been largely unacceptable to physicians.

TOTAL RESPONSES		
Agree	Undecided	Disagree
0	0	5

14. a) The integration of review for ambulatory services rendered by nonphysicians with existing PSRO efforts is not feasible at this time.

TOTAL RESPONSES		
Agree	Undecided	Disagree
1	2	1

b) As the trend toward whollistic patient care increases, the necessity of reviewing nonphysician treatment will become necessary sometime in the future.

TOTAL RESPONSES		
Agree	Undecided	Disagree
4	1	1

c) Incorporating the work done by nonphysician practitioners into the peer review process is quite feasible and could be undertaken immediately.

TOTAL RESPONSES		
Agree	Undecided	Disagree
3	1	4

15. a) The procedures for ambulatory quality assurance developed in our demonstration are transferrable to any other PSRO without modification or special arrangements.

TOTAL RESPONSES		
Agree	Undecided	Disagree
3	0	4

b) The nature of our demonstration is quite unique and it is unlikely that our approach could ever be duplicated in another PSRO.

TOTAL RESPONSES		
Agree	Undecided	Disagree
0	0	5

c) Transferrence of our ambulatory quality assurance procedures to other PSROs while achievable would entail much effort and very probably modification of arrangements and procedures.

TOTAL RESPONSES		
Agree	Undecided	Disagree
5	2	1

16. Problems uncovered in practices with respect to one review topic are often associated with problems in other topics.

TOTAL RESPONSES		
Agree	Undecided	Disagree
8	3	0

17. The criteria developed for each review topic should focus upon over and underutilization of medical services simultaneously.

TOTAL RESPONSES		
Agree	Undecided	Disagree
7	2	1

18. The ultimate goal of an ambulatory quality assurance review system is to develop standards and criteria, compare practice patterns to them and then encourage compliance where variations exist.

TOTAL RESPONSES		
Agree	Undecided	Disagree
7	1	1

SECTION IV

QUANTITATIVE PROGRAM DESCRIPTORS

METHOD

Requests for quantitative descriptions tailored to fit the specific programs of each of the five projects were sent out in August 1978. Requested data involved population and activity items for the sites under study by the projects including such items as the number of hospitals, clinics, physicians, patients and patient visits at these sites. Tabulations were requested of physicians by specialty and patients by source of payment. In addition quantitative descriptors of the review activities wererequested. These included numbers of physicians and patients reviewed by topic and the number of patient visits involved. Finally, distribution of the variations or exceptions to review criteria were requested along with quantitative description of the feedback and intervention function of the project. Other data of specific significance to individual projects was also included in the requests.

Quantitative data reports submitted by the projects in response to these requests were screened by HCMS personnel for completeness and consistency and follow up was made by telephone to make the data as valid as possible. Some requested data could not be supplied by the project because it was not available at the sites studied. Only data available as of August 31, 1978 were used and some sites were in the midst of the review cycle at that time. The quantitative data that was submitted by the five projects was formatted by HCMS staff into tabular form designed to be as consistent as possible among projects but still displaying the unique qualities of the individual project.

SITES AND PHYSICIANS REVIEWED

The ten ambulatory sites involved in the study were served by a total of 109 individual physicians, some practicing at more than one of the sites. Table 3 displays the distribution of physicians among sites and an estimated monthly rate of patient visits based on an eight-month estimate furnished to the PSRO by the sites. The three hospital based practices, numbered 5, 6 and 9, indicated the largest number of participating physicians but generally shared individual providers with the other sites, site number 5 sharing with sites 1 and 3, site number 6 with 2, 4, 7 and 10 and site 9 with 2, 4, 7 and 8. Thirty one of the physicians practiced at two hospital based sites, 6 and 9. No estimates of patient populations by site were available nor was any attempt made to determine patient crossover by site.

PATIENTS AND CASES REVIEWED

The PSRO developed estimates of patients at the 10 sites having diagnoses associated with review topics as of the beginning of the study. This data is presented in Table 4.

Of the 22,120 cases which might have been considered candidates for review, a total of 5,840 were abstracted for the study. Table 5 shows the distribution of cases by site and payment source and Table 6 shows the distribution by site and topic. Individual patients are identified across topics but not across sites. A total of 4,202 individual patients were involved in the 5,840 cases abstracted.

A comprehensive summary of review activity by site and topic was furnished by SCPPSRO. This summary is given in Table 7 and shows the duration of the study for each topic and the total patients abstracted, total patient years covered by the data and total number of visits covered by site and topic.

TABLE 3. NUMBER OF PHYSICIANS AND ESTIMATED MONTHLY PATIENT VISIT RATES BY SITE

SITE	NO. OF PHYSICIANS	ESTIMATED PATIENT VISITS PER MONTH
1	2	850
2	3	540
3	4	2,400
4	8	4,000
5	40	2,000
6	51	1,375
7	8	1,950
8	7	4,500
9	44	1,500
10	7	790
TOTAL	174	19,905
INDIVIDUALS	109	

TABLE 4. NUMBER OF PATIENTS AT EACH SITE HAVING DIAGNOSES ASSOCIATED WITH REVIEW TOPICS AS OF THE BEGINNING OF THE STUDY

	SITE										
TOPIC	1	2	3	4	5	6	7	8	9	10	TOTAL
1. Diabetes	57	36	161	269	134	92	131	302	100	53	1,336
2. Hypertension	210	134	595	991	496	340	483	1126	372	195	4,942
3. Heart Disease	28	18	78	127	65	45	64	147	49	26	647
4. Anxiety/Depression	221	141	625	1042	521	358	508	1172	301	205	5,184
5. UTI	60	38	169	282	141	97	137	317	106	55	1,402
6. Chest Pain	37	24	105	176	76	60	85	193	66	35	857
7. Arthritis	62	40	177	294	146	101	143	331	110	58	1,462
8. Preventive Care Adult	269	171	758	1264	632	435	616	1422	474	249	6,290
TOTAL	944	602	2668	4445	2211	1528	2167	6010	1669	876	22,120

TABLE 5. NUMBER OF PATIENTS ABSTRACTED AT EACH SITE TABULATED BY PAYMENT SOURCE

	SITE										
PAYMENT SOURCE	1	2	3	4	5	6	7	8	9	10	TOTAL
Medicare	167	38	182	298	167	82	189	235	217	135	1,710
Medicaid	9	0	62	26	50	217	11	11	70	15	471
Regular Blue Shield	145	27	247	36	349	3	15	152	2	147	1,123
Mennonite Relief Fund	17	24	1	328	13	8	4	8	47	2	452
Commercial Insurance	183	39	54	89	275	1	141	202	42	100	1,126
No Insurance	2	16	96	38	40		1	17	374*	7	591
Information Not Available	70	25	20	61	20	3	94	42	12	20	367
TOTAL	592	169	662	876	914	314	455	667	764	426	5,840

* Site 9 does not maintain complete insurance information on their patients. Some of these may have Blue Shield or other insurance.

TABLE 6. NUMBER OF PATIENTS REVIEWED AT EACH SITE DURING STUDY TABULATED BY TOPIC

	SITE										
TOPIC	1	2	3	4	5	6	7	8	9	10	TOTAL
1. Diabetes	46	16	64	126	90	60	96	75	81	47	701
2. Hypertension	100	22	101	101	95	73	92	100	115	98	897
3. Heart Disease	49	15	58	68	101	32	52	70	50	71	566
4. Anxiety/Depression	100	23	111	131	168	79	83	101	146	62	1,004
5. UTI	60	27	95	50	132	16	27	98	99		604
6. Chest Pain	51	12	85	44	97	19	19	41	94	21	483
7. Arthritis	87	18	103	73	113	29	59	80	79	92	733
8. Preventive Care-Adult	100	36	45	283	118	6	27	102	100	35	852
TOTAL	593	169	662	876	914	314	455	667	764	426	5,840
INDIVIDUALS	335	142	458	743	676	205	370	486	491	296	4,202

TABLE 7. NUMBER OF PATIENTS, PATIENT YEARS AND VISITS REVIEWED AT EACH SITE BY TOPIC

TOPIC	POTENTIAL TIME PERIOD COVERED BY TOPIC	SITE 1			SITE 2			SITE 3			SITE 4		
		PTS.	PT YRS.	VISITS	PTS.	PT YRS.	VISITS	PTS.	PT YRS.	VISITS	PTS.	PT YRS.	VISITS
1 Diabetes	2 years	46	67	709	16	7	86	64	80	1,005	126	214	2,265
2 Hypertension	2 years	100	148	1,245	22	6	89	101	111	1,604	101	162	1,672
3 Heart Disease	2 years	49	70	667	15	9	113	58	80	934	68	119	1,235
4 Anxiety/ Depression	2 years	100	154	1,198	23	11	149	111	148	1,457	131	178	2,387
5 UTI	4 months	60	5	155	27	4	96	95	13	396	50	9	194
6 Chest Pain	8 months	41	15	240	12	1	32	85	22	426	44	18	272
7 Arthritis	2 years	87	120	1,068	18	5	98	103	135	1,626	73	122	1,160
8 Preventive Care-Adult	8 months	100	27	432	36	5	119	45	5	167	283	82	834

TABLE 7 (CONT'D)

TOPIC	POTENTIAL TIME PERIOD COVERED BY TOPIC	SITE 5			SITE 6			SITE 7			SITE 8		
		PTS.	PT YRS.	VISITS	PTS.	PT YRS.	VISITS	PTS.	PT YRS.	VISITS	PTS.	PT YRS.	VISITS
1 Diabetes	2 years	90	139	1,039	60	96	1,168	96	158	1,528	75	115	1,290
2 Hypertension	2 years	95	143	1,097	73	114	1,172	92	155	1,538	100	143	1,469
3 Heart Disease	2 years	101	156	1,140	32	53	678	52	93	992	70	96	1,137
4 Anxiety/ Depression	2 years	168	214	1,745	79	147	1,354	83	137	1,609	101	149	2,132
5 UTI	4 months	132	15	352	16	2	42	27	5	143	98	13	369
6 Chest Pain	8 months	97	26	301	19	9	100	19	8	95	41	10	150
7 Arthritis	2 years	113	161	1,049	29	41	501	59	102	1,285	80	114	1,244
8 Preventive Care-Adult	8 months	118	23	294	6	2	17	27	6	74	102	23	374

TABLE 7 (CONT'D)

TOPIC	POTENTIAL TIME PERIOD COVERED BY TOPIC	SITE 9			SITE 10			TOTAL FOR ALL SITES		
		PTS.	PT YRS.	VISITS	PTS.	PT YRS.	VISITS	PTS.	PT YRS.	VISITS
1 Diabetes	2 years	81	105	1,231	47	63	424	701	1,044	10,745
2 Hypertension	2 years	115	145	1,329	98	125	763	897	1,252	11,978
3 Heart Disease	2 years	50	70	753	71	101	629	566	847	8,278
4 Anxiety/ Depression	2 years	146	227	2,010	62	73	406	1,004	1,438	14,447
5 UTI	4 months	99	13	365				604	79	2,112
6 Chest Pain	8 months	94	22	400	21	4	67	473	135	2,083
7 Arthritis	2 years	79	97	913	92	103	782	733	1,000	9,726
8 Preventive Care-Adult	8 months	100	19	347	35	3	50	852	195	2,708

SECTION V

DISCUSSION OF REVIEW DATA

METHOD

A five percent random sample of abstracts was requested from the project. This sample was to be selected by topic and site with no fewer than five cases for any topic for any site. This procedure resulted in a 7% sample. The data was used to estimate the data availability rate, defined as the number of cases for which a particular data item was noted in the abstract at least once divided by the total number of cases, shown in percentage form. Of interest was a comparison of the availability rates of data items involved in the "critical criteria" as defined by the project with rates for data items not involved in the critical criteria.

"Variations" were defined as a failure to meet one of the critical criteria. Some of the variations noted were referred to the sites and studied for possible justification. Variations not so justified were called "deficiencies." Variation and deficiency rates were expressed as percentage deviations from full compliance and these rates were submitted by the project for the entire population studied.

DESCRIPTION OF CRITERIA/DATA ITEMS

Table 8 lists abstracted data items associated with critical criteria for each of the eight topics studied. Organization is by topic for which are shown:

1. Number of cases studied
2. Number of cases in the HCMS sample
3. Mean years of care for patients in the sample
4. Mean visits per year for those patients

Critical criteria are listed for each topic and each criteria is classified according to the following scheme:

CODE	CLASS
DR	Required Diagnostic Process
DP	Prohibited Diagnostic Process
DC	Conditional Diagnostic Process
TR	Required Treatment Process
TP	Prohibited Treatment Process
TC	Conditional Treatment Process
OV	Outcome Indicator Based on Values (LAB)
OU	Outcome Indicator Involving Overutilization
OE	Outcome Indicator Involving Occurrence of Events

Critical criteria classifications are summarized in the following table:

	REQUIRED (VALUES)	PROHIBITED	CONDITIONAL (EVENTS)	TOTAL
DIAGNOSES	18		2	20
TREATMENT	6	3	10	19
OUTCOMES	3	1	3	7
TOTAL	27	4	15	46

Note that we might expect failure to meet DR, TR and OV criteria in cases of underutilization and DP, TP and OU in cases of overutilization.

Variation percents are also listed for each critical criteria. These rates are for the whole population and were taken from the data displays prepared by the PSRO for feedback to the sites.

Data items associated with critical criteria are then listed along with the data processing code, form required, number and percent of patients in the HCMS sample for which data entries were made, and total number of procedures and utilization rates in the sample. Data items recorded in the abstracts but not related to critical criteria are listed at the end of each topic section.

TABLE 8. CRITERIA/DATA ITEMS

1. DIABETES MELLITUS	Cases:	701	Mean Years:	1.45
	Sample Size:	51	Visits Per Patient Year:	11.7

A. Fasting Blood Sugar results less than 200 mg% (FBS 200 mg% and/or Random or 4 Hour Post Prandial Blood Sugar results less than 250 mg% (RBS/4 hr pp 250 mg%) - In order to meet this criterion, no random, fasting or 4 hr pp blood sugar results may exceed the indicated value (200 and 250 mg%) at any time following the data of diagnosis during the study period.

NOTE: If no fasting, random or 4 hr post prandial blood sugars are performed during the study period or following the date of diagnosis, the criterion is recorded as not met.

VARIATION RATE: 51% CLASS OV

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
017 4 Hr pp Blood Glucose	Values	5	10	18	.02	.2
029 Fasting Blood Sugar	Values	42	82	182	.21	2.5
031 Random Blood Sugar	Values	39	76	189	.22	2.6

B. Three visits per year - One patient visit every 120 days. In order to meet this criterion, there must be at least one patient visit during every 120 day period beginning at the date of diagnosis or the first visit during the study period for those patients diagnosed prior to the study period.

VARIATION RATE: 36% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
600 Visits	Dates	51	100	863	1.00	11.7

TABLE 8 (CONT'D)

C. Weight loss - In order to meet this criterion, no two consecutive weights at any time during the study period can be equal to or greater than the weight on the diagnosis date. For patients diagnosed prior to the two-year period, the criterion applies to all recorded weights. The criterion is not met when the patient gains weight and is overweight. However, a patient who gains weight but who is not overweight is considered to have met the criterion by exception.

VARIATION RATE: 23% CLASS OV

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
002 Weight	Values	51	100	653	.76	8.9

D. Diet therapy before oral hypoglycemics - In order to meet the criterion there must be evidence that a patient who is diagnosed as having diabetes within the two-year study period receives diet therapy before oral hypoglycemics are prescribed.

VARIATION RATE: 3% CLASS TC

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
701 Patient Ed. Diet	Sequence	40	78	205	.24	2.8
109 Insulin Oral Hypog.	Sequence	41	80	468	.54	6.3

E. No hospitalization - In order to meet this criterion, there must be no evidence of inpatient hospitalization throughout the two-year study period. Any hospitalization of a patient diagnosed prior to the study period will

TABLE 8 (CONT'D)

result in a variation. For patients diagnosed within the study period, the criterion applies after the second visit, regarding the diagnosis date as of the first visit.

VARIATION RATE: 26% CLASS OU

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
802 Hospitalization	Absence	9	18	11	.01	0.2

F. Other Criteria

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
001 Height	Value	22	43	NA	NA	NA
003 Systolic BP	Value	51	100	648	.75	8.8
004 Diastolic BP	Value	51	100	648	.75	8.8
005 Optic Fundi Exam	Done	25	49	47	.05	0.6
006 EKD Done	Done	17	33	24	.03	0.3
010 Chest X-Ray Done	Done	16	31	24	.03	0.3
019 Glucose Tolerance Done	Done	1	2	1	.00	0.0
021 BUN Done	Done	22	43	37	.04	0.5
022 Serum Creatine Done	Done	15	29	19	.02	0.3
024 Serum Cholesteral Done	Done	17	33	23	.03	0.3
025 Triglycerides Done	Done	11	22	16	.02	0.2
026 Urinalysis Done	Done	34	67	86	.10	1.2
027 CBC Done	Done	20	39	40	.05	0.5
030 2 Hr pp Blood Sugar	Value	16	31	22	.03	0.3
048 Visual Accuity Noted	Done	24	47	57	.07	0.8

TABLE 8 (CONT'D)

(Other Criteria Cont'd)

049 Heart Exam	Done	40	78	169	.20	2.3
066 Impotence Noted	Done	2	4	2	.00	0.0
067 Perif. Vasc. Noted	Done	21	41	60	.07	0.7
068 Obesity Noted	Done	24	47	312	.36	4.2
069 Neuro Exam	Done	20	39	39	.05	0.5
090 Screening Panels	Done	17	33	25	.03	0.3
650 Telephone Call	Done	24	47	122	.14	1.6
655 House Call	Done	5	10	5	.01	0.7
800 Revisit	Done	50	98	421	.49	5.7
801 Consult	Done	14	27	30	.03	0.4
804 Other Hosp.	Done	27	53	46	.05	0.6
707 Other Pat. Ed.	Done	23	45	52	.06	0.7

TABLE 8 (CONT'D)

2. HYPERTENSION	Cases: 897	Mean Pt Years: 1.37
	Sample Size: 50	Mean Visits Per Pat. Year: 8.6

A. Blood Pressure - The patients' blood pressures are reviewed beginning two months after the problem was identified by the practice. In order to meet the criterion, all groupings of two consecutive readings must include one diastolic blood pressure of 90 mm Hg. or less.

VARIATION RATE: 38% CLASS OV

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
004 Diastolic BP	Value	50	100	539	.92	7.9

B. Visits - One visit each 120 days. In order to meet this criterion, there must be a patient visit at least once during each 120-day period following the date the problem of hypertension was identified by the practice.

VARIATION RATE: 42% CLASS TR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
600 Three visits per year	Dates	50	100	586	1.00	8.6

C. Fundoscopic Exam - In order to meet the criterion, a fundoscopic examination must be performed at least once during the two-year study period.

VARIATION RATE: 47% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
005 Fundiscopic Exam	Done	27	54	39	.07	0.6

TABLE 8 (CONT'D)

D. Drugs - In order to meet the criterion, the patient must have a diuretic or Propanolol prescribed before or concurrently with the prescription of any specific antihypertensive drug.

VARIATION RATE: 5% CLASS TC

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
101 Diuretic	Sequence	48	96	368	.80	5.4
102 Propranolol	Sequence	9	18	74	.13	0.7
103 Other Spec. Hyper.	Sequence	37	74	287	.49	4.2

E. Urinalysis - In order to meet the criterion, a urinalysis must be performed at least once during the two year study period.

VARIATION RATE: 30% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
026 Urinalysis	Done	37	74	69	.12	1.0

F. Serum Potassium - In order to meet the criterion, a serum potassium must be performed at least once during the two-year study period - only on those patients who were on diuretics.

VARIATION RATE: 42% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
101 Diuretics	Sequence	48	96	368	.63	5.4
020 Serum Potassium	Sequence	26	52	57	.10	0.8

TABLE 8 (CONT'D)

G. Other Criteria

DATA ITEMS	REQ	SAMPLE DATA NO. PATIENTS	%	NO. PROCEDURES	RATES PER VISIT	PER PAT. YR.
002 Weight	Value	50	100	466	.80	6.8
003 Systolic BP	Value	50	100	539	.92	7.9
006 EKG*	Done	17	34	26	.04	0.4
010 Chest X-Ray	Done	16	32	14	.02	0.2
021 BUN	Value	36	72	70	.12	1.0
022 Serum Creatine	Value	19	38	42	.07	0.6
023 Serum Uric Acid	Value	38	76	62	.11	0.9
024 Serum Cholestrol	Value	33	66	46	.08	0.7
025 Triglycerides	Value	20	40	24	.04	0.4
027 CBC	Value	34	68	56	.10	0.8
029 Fasting Blood Sugar	Value	17	34	36	.06	0.5
030 2 PC Blood Sugar	Value	3	6	3	.01	0.0
031 Random Blood Sugar	Value	36	72	73	.12	1.1
032 Plasma Renin	Done	1	2	1	.00	0.0
033 Urinary Catacham	Done	0	0	0	.00	0.0
034 URN/Plasma Aldst	Done	0	0	0	.00	0.0
035 URN/Plasma Corts	Done	0	0	0	.00	0.0
036 Intraven/Pyelogram	Done	3	6	2	.00	0.0
037 Renal Artgram	Done	0	0	0	.00	0.0
THERAPEUTICS						
104 Oral Contra-Estr.	Done	2	4	10	.02	0.1
105 Potassium Suppl	Done	6	12	25	.04	0.4
106 Digitalis	Done	4	8	24	.04	0.4
107 Ataprct/Tranq	Done	19	38	86	.15	1.3

*Added to critical criteria as result of review process, CLASS DR.

TABLE 8 (CONT'D)

(OTHER CRITERIA CONT'D)

108 Sedatives	Done	9	18	41	.07	0.6
701 Diet Instr.	Done	22	44	70	.12	1.0
702 Salt Restriction	Done	9	18	18	.03	0.3
800 Revisit	Done	48	96	337	.58	4.9
801 Consultant	Done	13	26	18	.03	0.3
802 Hospital	Done	7	14	7	.01	0.1
803 Other Disposition	Done	18	36	39	.05	0.4
650 Telephone	Done	16	32	35	.06	0.5
655 House Call	Done	2	4	10	.02	0.1

TABLE 8 (CONT'D)

3. ISCHEMIC HEART DISEASE

Cases: 566
Sample Size: 50
Mean Patient Years : 1.45
Visits Per Patient Yr : 10.6

A. Smoking History Documented - (100%) - In order to meet this criterion, there must be documented evidence in the medical record of the patients history of smoking. If there was no documentation of smoking history, the case does not meet (varies from) the criterion.

VARIATION RATE: 65% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
056 Smoking History	Done	19	38	27	.04	0.4

B. Smoking Patient Education - (100%) - In order to meet this criterion, there must be documented evidence in the medical record that patients who smoke received patient education. If there was no smoking history documented the criterion is not met.

VARIATION RATE: 76% CLASS TC

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
056 Smoking History	Sequence	19	38	27	.04	0.4
103 Patient Smoking Ed.	Sequence	3	6	6	.01	0.1

C. EKG Done - (100%) - In order to meet this criterion, there must be at least one EKG reported within the study period.

VARIATION RATE: 32% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
006 EKG	Done	31	62	52	.07	0.7

TABLE 8 (CONT'D)

D. No Myocardial Infarction (0%) - In order to meet this criterion, the patient should not have had a myocardial infarction at any time following the diagnosis date.

VARIATION RATE: 7% CLASS OE

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
303 MI	Absent	5	10	5	.01	0.1

E. No Cardiac Death (0%) - In order to meet this criterion, deaths during the study period must be for other than cardiac reasons. If the death was due to cardiac reasons or if no cause of death was specified in the medical record, the case did not meet the criterion.

VARIATION RATE: 3% CLASS OE

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
304 MI/Death	Absent	1	2	1	.00	0.0

F. Visit Every 120 Days - In order to meet this criterion, the patient must visit the physician at least once during every 120-day period following diagnosis.

VARIATION RATE: 31% CLASS TR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
600 Visit Every 120 Days	Dates	50	100	764	1.00	10.6

TABLE 8 (CONT'D)

G. Other Criteria

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
002 Weight	Value	50	100	557	.73	7.7
003 Systolic BP	Value	50	100	616	.81	8.5
004 Diastolic BP	Value	50	100	616	.81	8.5
010 Chest X-Ray	Done	27	54	38	.05	0.5
013 Ex EKG	Done	6	12	6	.01	0.1
024 Serum Cholestrol	Value	28	56	38	.05	0.5
025 Triglycerides	Value	18	36	27	.04	0.4
026 Urinalysis	Value	29	58	91	.12	1.3
053 Family History	Done	26	52	29	.04	0.4
065 Occup. History	Done	16	32	20	.03	0.3
076 Past History	Done	25	50	37	.05	0.5
078 Chest Pain Doc.	Done	33	66	116	.15	1.6
095 Exercise History	Done	16	30	36	.05	0.5
101 Diuretic	Done	42	84	361	.47	5.0
102 Propranil	Done	12	24	94	.12	1.3
106 Digitalis	Done	27	54	243	.32	3.4
127 Vasodilators	Done	26	52	175	.23	2.4
140 Cardiac Suppl.	Done	0	0	0	.00	0.0
701 Diet Ed.	Done	20	40	66	.09	0.9
706 Exercise Ed.	Done	12	24	29	.04	0.4
800 Revisit	Done	45	90	368	.48	5.1
801 Consult	Done	9	18	15	.02	0.2
802 Hosp/Cardiac	Done	14	28	18	.02	0.2
803 Other	Done	21	42	36	.05	0.5
804 Hosp/Noncardiac	Done	16	32	19	.02	0.3
806 Other M/S	Done	17	34	25	.03	0.3

TABLE 8 (CONT'D)

4. ANXIETY/DEPRESSION

Cases:	1004	Mean Patient Years	: 1.40
Sample Size:	58	Visits Per Patient Year	: 12.4

A. Criterion 1: Psychotherapy or Counselling - In order to meet this criterion, psychotherapy or counselling must occur anytime during the study period.

VARIATION RATE: 45% CLASS TR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
708 Counselling or Psycho	Done	34	59	175	.17	2.2

B. Criterion 2 - No Sedatives are prescribed when there is mention of depression - In order to meet this criterion, a sedative may not be prescribed for a patient on any date (visit) that depression is also noted.

VARIATION RATE: 4% CLASS TP

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
202 Mention Depression	Sequence	40	69	137	.14	1.7
108 Sedative	Sequence	13	22	69	.07	0.9

C. Criterion 3 - Follow-up is documented at each visit for the problem - In order to meet this criterion, each time anxiety or depression is mentioned at a visit, there must be documented evidence that some plans for follow-up were made. Plans for follow-up include a specified reappointment interval, referral for psychiatric consultation, admission to a hospital or other facility for psychiatric reasons or other referrals for emotional reasons.

VARIATION RATE: 66% CLASS TR

TABLE 8 (CONT'D)

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
201 Mention Anxiety	Sequence	55	95	197	.20	2.4
202 Mention Depression	Sequence	40	69	137	.14	1.7
800 Reappointment	Sequence	55	95	550	.55	6.8
801 Other Follow-up	Sequence	10	17	23	.02	0.3

D. Criterion 4 - No suicide attempts or successes - In order to meet this criterion, there must be no evidence of successful or unsuccessful suicide by the patient from the time the diagnosis was made and the practice began treating the problem.

VARIATION RATE: 2% CLASS OE

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
301 Suicide Attempt	Absent	2	3	2	.00	0.0
302 Suicide Success	Absent	0	0	0	.00	0.0

E. Other Criteria

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
003 Systolic BP	Value	58	100	706	.70	8.7
004 Diastolic BP	Value	58	100	706	.70	8.7
027 Compl. BC Ordered	Done	30	52	42	.04	0.5
073 History of Suicide	Done	4	7	4	.00	0.0
074 T-4 Ordered	Done	18	31	26	.03	0.3
090 Screening Panel	Done	21	36	24	.02	0.3
107 Ataract/Tranq	Done	48	83	392	.39	4.8

TABLE 8 (CONT'D)

5. UTI	Cases:	607	Mean Patient Years:	0.17
	Sample Size:	48	Visits Per Patient Year:	21.4

A. Criterion 1 - History of Urinary Tract Infection - In order to meet this criterion, there must be a documented past medical history of urinary tract infections in the record.

VARIATION RATE: 58% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
076 Past Hx UTI	Done	19	40	23	.13	2.9
091 Recurrent UTI	Done	2	4	2	.01	0.2

B. Criterion 2 - Urinalysis Precedes Treatment - This criterion applies only to those patients who received antibiotics, sulfonomides or other anti-infective agents. In order to meet the criterion, a urinalysis must be ordered or done before or at the same visit that treatment was initiated (drugs ordered).

VARIATION RATE: 11% CLASS DC

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
085 Urinalysis	Sequence	44	92	85	.50	10.6
124 Antibiotics	Sequence	20	42	40	.23	5.0
125 Sulfonomides	Sequence	24	50	28	.16	3.5
126 Anti-Infective Agents	Sequence	8	17	14	.08	1.8

C. Criterion 3 - Follow-up - In order to meet this criterion, definite follow-up of the patient must be specified on the date the urinary tract infection was diagnosed. Follow-up includes specific reappointment or referral or hospitalization for the problem.

VARIATION RATE: 36% CLASS TR

TABLE 8 (CONT'D)

DATA ITEMS	REQ	SAMPLE DATA NO. PATIENTS	%	NO. PROCEDURES	RATES PER VISIT	PER PAT. YR.
205 Diagnosis	Sequence	39	81	60	.35	7.5
800 Revisit	Sequence	38	79	89	.52	11.1
801 Consult	Sequence	6	13	10	.06	1.3
802 Hospital	Sequence	2	4	3	.02	0.4

D. Criterion 4 - Follow-up Urine Culture - This criterion applies only to those patients for whom drugs were prescribed (antibiotics, sulfonamides or other anti-infective drugs). In order to meet the criterion, a urine culture, gram stain or urine screen must be ordered or done three weeks or more after treatment is begun (drugs prescribed).

VARIATION RATE: 76% CLASS DC

DATA ITEMS	REQ	SAMPLE DATA NO. PATIENTS	%	NO. PROCEDURES	RATES PER VISIT	PER PAT. YR.
086 Urine Culture	Sequence	11	23	11	.06	1.4
087 Gram Stain	Sequence	8	17	9	.05	1.1
088 Urine Screen	Sequence	17	35	20	.12	2.5
124 Antibiotics	Sequence	20	42	40	.23	5.0
125 Sulfonamides	Sequence	24	50	28	.16	3.5
126 Anti-Infectives	Sequence	8	17	14	.08	1.8

E. Criterion 5 - Treatment - This criterion applies only to those patients who had positive urine cultures or screens. In order to meet this criterion, treatment (indicated drugs prescribed) must occur concurrent with or at any time subsequent to all positive urine cultures or screens.

VARIATION RATE: 8% CLASS TC

Same data elements as D. Criterion 4--different sequence required.

TABLE 8 (CONT'D)

F. Other Criteria

DATA ITEMS	REQ	SAMPLE DATA NO. PATIENTS	%	NO. PROCEDURES	RATES PER VISIT	PER PAT. YR.
011 Void Cystogram	Order	0	0	0	.00	0.0
511 Void Cystogram	Value	1	2	1	.01	0.1
012 Retro. Peylogram	Order	0	0	0	.00	0.0
512 Retro. Peylogram	Value	0	0	0	.00	0.0
036 IVP	Order	3	6	3	.02	0.4
536 IVP	Value	7	15	7	.04	0.9
089 Cystoscopy	Order	0	0	0	.00	0.0
589 Cystoscopy	Value	2	4	2	.01	0.2
160 Tx Cont. Past 2 Mo.	Value	7	15	7	.04	0.9
401 Difficult Urination	Value	17	35	19	.11	2.4
402 Frequency	Value	24	50	29	.17	3.6
403 Urgency	Value	17	35	19	.11	2.4
404 Burning	Value	18	38	18	.11	2.3
405 Pain	Value	6	13	7	.04	0.9
406 Blood in Urine	Value	5	10	5	.03	0.6
590 Sensitivity	Value	10	21	12	.07	1.5
592 RBC	Value	45	94	84	.49	10.5
593 WBC	Value	45	94	84	.49	10.5
594 Bacteria	Value	45	94	83	.49	10.4
803 Other Dispos	Done	18	38	24	.14	3.0
804 Other Hosp.	Done	2	4	2	.01	0.2
806 Other Consult	Done	1	2	1	.01	0.1

TABLE 8 (CONT'D)

6. CHEST PAIN	Cases: 483	Mean Patient Years: 0.35
Sample Size: 50	Visits per Patient Year: 13.7

A. Criterion 1 - Past Medical History - In order to meet this criterion, the patient's medical history must be documented within the medical record any time within the eight-month study period.

VARIATION RATE: 58%	CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
076 Past Medical Hx	Done	20	40	23	.10	1.3

B. Criterion 2 - Heart Examination - In order to meet this criterion, there must be documented evidence of examination of the heart on or after the date the patient was treated for acute or episodic chest pain.

VARIATION RATE: 19%	CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
049 Heart Exam	Done	42	84	86	.36	5.0

C. Criterion 3 - Chest Wall or Lung Examination - In order to meet this criterion, there must be documented evidence of chest wall or lung examination on or after the date the patient was treated for acute or episodic chest pain.

VARIATION RATE: 12%	CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
077 Chest/Lung Exam	Done	45	90	114	.48	6.6

TABLE 8 (CONT'D)

D. Criterion 4 - Blood Pressure Values - In order to meet this criterion, there must be blood pressure values documented on or after the date the patient was treated for acute or episodic chest pain.

VARIATION RATE: 6% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
003 Systolic BP	Values	49	98	187	.79	10.8
004 Diastolic BP	Values	49	98	187	.79	10.8

E. Criterion 5 - Assessment and Follow-up - In order to meet this criterion, there must be documented evidence of assessment or follow-up of the problem on or after the date the patient was treated for acute or episodic chest pain. A diagnosis must be made or follow-up care such as a specific reappointment interval, referral to a consultant or hospitalization must be documented.

VARIATION RATE: 21% CLASS TR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
203 Subsequent Dx	Sequence	35	70	64	.27	3.7
800 Revisit	Sequence	40	80	101	.43	5.8
801 Consult	Sequence	10	20	19	.08	1.1
802 Hosp.	Sequence	7	14	8	.03	0.5
803 Other	Sequence	19	38	26	.11	1.5

TABLE 8 (CONT'D)

F. Other Criteria

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
006 EKG	Done	37	74	40	.17	2.3
010 Chest X-Ray	Done	22	44	22	.09	1.3
017 4 Hr pp Blood Glucose	Value	1	2	1	.00	0.1
019 Glucose Tol.	Value	0	0	0	.00	0.0
024 Serum Cholesterol	Value	16	32	20	.08	1.2
026 UA	Value	20	40	22	.09	1.3
027 CBC	Value	25	50	26	.11	1.5
029 Fasting Glucose	Value	10	20	14	.05	0.8
030 2 Hr pp Glucose	Value	1	2	1	.00	0.1
031 Random Glucose	Value	12	24	13	.05	0.8
053 Family Hx	Done	14	28	15	.06	0.9
078 Hx Prev. Chest Pain	Done	35	70	62	.26	3.6
090 Screening Panels	Done	14	28	16	.07	0.9
107 Atar/Tranq	Done	16	32	52	.22	3.0
108 Sedatives	Done	3	6	6	.03	0.3
113 Sk. Musc. Relax.	Done	1	2	2	.01	0.1
114 Salycilates	Done	9	18	10	.04	0.6
115 Analgesics	Done	10	20	13	.05	0.8
116 Narcotics	Done	8	16	8	.03	0.5
117 Phenyl. Buta.	Done	0	0	0	.00	0.0
118 Indomethacin	Done	0	0	0	.00	0.0

TABLE 8 (CONT'D)

7. ARTHRITIS

Cases:	734		Mean Patient Years:	1.25
Sample Size:	51		Visits per Patient Year:	11.3

A. Criterion 1 - Past Medical History Done - In order to meet this criterion, evidence of a history including history for peptic ulcer of gastrointestinal bleeding must appear in the medical record. This criterion applies to all patients in the study.

VARIATION RATE: 81% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
079 Hx Incl. Ulcer, G.I. Bleeding	Done	13	25	15	.02	0.2

B. Criterion 2 - No Prescription of Systemic Steroids - This criterion is restricted to patients diagnosed within the study period. In order to meet the criterion, there may be no systemic steroids prescribed on or after the diagnosis date.

VARIATION RATE: 14% CLASS TP

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
120 Systemic Steroid	Absent	9	18	21	.03	0.3

C. Criterion 3 - Aspirin Prescribed Before Anti-Inflammatory Agents - This criterion is restricted to patients who were diagnosed within the study period and who received anti-inflammatory agents. Of those patients, aspirin must precede the prescription of anti-inflammatory agents unless the patient had active gastrointestinal bleeding or peptic ulcer. In the case of active gastrointestinal bleeding or peptic ulcer the criterion was met if aspirin was not prescribed.

VARIATION RATE: 71% CLASS TC

TABLE 8 (CONT'D)

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
080 G.I. Bleeding	Sequence	4	8	4	.01	0.1
081 Active Peptic Ulcer	Sequence	0	0	0	.00	0.0
114 Aspirin	Sequence	22	43	86	.12	1.4
119 Anti-Inflam. Agent	Sequence	20	39	80	.11	1.3

D. Criterion 4 - Phenylbutazone Derivitives and/or Indomethacin not Prescribed if the Patient has Active Gastrointestinal Bleeding or Peptic Ulcer - This criterion is limited to those patients who received Phenylbutazones, Indomethacin and/or Naproxen. In order to meet the criterion, there must not be any evidence of gastrointestinal bleeding or peptic ulcer within the study period. If no medical history is done, the criterion is not met.

VARIATION RATE: 86% CLASS TC

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
080 G.I. Bleeding	Sequence	4	8	4	.01	0.1
081 Active Peptic Ulcer	Sequence	0	0	0	.00	0.0
117 Phenylbutazones	Sequence	6	12	15	.02	0.2
118 Indomethacin	Sequence	15	29	38	.05	0.6

E. Criterion 5 - No hospitalization for Arthritis - This criterion applies to all patients. In order to meet this criterion, there must not be evidence that the patient was hospitalized for arthritis within the two-year study period.

VARIATION RATE: 5% CLASS TP

TABLE 8 (CONT'D)

DATA ITEMS	REQ	SAMPLE DATA NO. PATIENTS	%	NO. PROCEDURES	RATES PER VISIT	PER PAT. YR.
802 Hosp. for Arthritis	Absent	3	6	3	.00	0.0

F. Other Criteria

DATA ITEMS	REQ	SAMPLE DATA NO. PATIENTS	%	NO. PROCEDURES	RATES PER VISIT	PER PAT. YR.
009 Bone X-Ray	Done	24	47	34	.05	0.5
026 Urinalysis	Value	25	49	68	.09	1.1
027 CBC	Value	28	55	78	.11	1.2
053 Family Hx	Done	17	33	18	.03	0.3
082 Sed. Rate	Value	18	35	26	.04	0.4
083 RH Factor	Value	9	18	9	.01	0.1
084 Antinuclear Ant.	Value	4	8	5	.01	0.1
204 Types of Arthritis	Value	42	82	133	.18	2.1
115 Non-Salcylates	Done	17	33	57	.08	0.9
116 Narcotics	Done	3	6	8	.01	0.1
121 Int. Cost.	Done	6	12	10	.01	0.1
122 Gold. Prep.	Done	2	4	53	.07	0.8
123 Antimalarials	Done	0	0	0	.00	0.0
150 Phys. Therapy	Done	22	43	77	.11	1.2
800 Revisit	Done	48	94	322	.45	5.1
801 Consult	Done	19	37	48	.07	0.8
803 Other Dispos.	Done	4	8	14	.02	0.2
804 Other Hosp.	Done	12	24	24	.03	0.3

TABLE 8 (CONT'D)

8. PREVENTIVE CARE - ADULT	Cases:	852	Mean Patient Years:	0.21
	Sample Size:	52	Visits Per Patient Year:	15.3

A. All abnormal laboratory results recognized - In order to meet this criterion, all laboratory test results which were above or below normal limits for the practice site must be recognized by the physician. If there was an abnormal laboratory result reported but no documented evidence of recognition by the physician, the case will not meet this criterion.

VARIATION RATE: 25% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
900 Abnormal Lab. Results	Values	12	23	21	.13	1.9

B. Tetanus History Documented - In order to meet this criterion, there must be documented evidence in the medical record of the patients tetanus toxoid immunization history. If immunization history was not in the record, the case will not meet this criterion.

VARIATION RATE: 53% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
058 Tetanus History	Done	25	48	26	.16	2.4

C. Plans for Incomplete Tetanus Toxoid Immunization - In order to meet this criterion, there must be documented evidence in the medical record that, when indicated, tetanus toxoid immunization is either given or planned to be given. If there was no immunization history or plans for immunization, the case does not meet the criterion. If the date of the last

TABLE 8 (CONT'D)

immunization was not recorded or if the most recent immunization was ten years ago or more and no plans for immunizations were documented, the case does not meet the criterion.

VARIATION RATE: 66% CLASS TC

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
059 Last Tetanus Tox.	Done	18	35	18	.11	1.6
060 Tetanus Tox. Given	Done	7	13	7	.04	0.6

D. Smoking History Documented - In order to meet this criterion, there must be documented evidence in the medical record that the patient's history of smoking was taken.

VARIATION RATE: 38% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
056 Smoking History	Done	38	73	40	.24	3.7

E. Smoking Patient Education - In order to meet this criterion, there must be documented evidence in the medical record that all patients who smoke were given patient education. If the patient is a nonsmoker, the criterion is met. If no smoking history was documented or if the patient who smokes does not receive smoking patient education, the criterion is not met.

VARIATION RATE: 56% CLASS TC

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
703 Smoking Pat. Ed.	Done	1	2	1	.01	0.1

TABLE 8 (CONT'D)

F. Alcohol History Documented - In order to meet this criterion, there must be documented evidence in the medical record that the patient's history of drinking alcohol was taken.

VARIATION RATE: 39% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
057 Alcohol History	Done	32	62	36	.22	3.3

G. Alcohol Patient Education - In order to meet this criterion, there must be documented evidence in the medical record that all patients who drink alcohol receive patient education. If the patient is a non-drinker, the criterion is met. If no alcohol history is documented or if a patient who uses alcohol did not receive patient education, the criterion is not met.

VARIATION RATE 58% CLASS TC

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
704 Alcohol Pat. Ed.	Done	2	4	4	.02	0.4

H. Seat Belt Use History - In order to meet this criterion, there must be documented evidence in the medical record that the patient's history concerning the use of the automobile seat belts was taken.

VARIATION RATE: 78% CLASS DR

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
063 Use of Seat Belt	Done	9	17	9	.05	0.8

TABLE 8 (CONT'D)

I. Seat Belt Patient Education - In order to meet this criterion, there must be documented evidence in the medical record that patients who do not use automobile seat belts by history receive patient education. If no seat belt use history is documented or if the non-seatbelt user did not receive patient education, the criterion is not met.

VARIATION RATE: 96% CLASS TC

DATA ITEMS	REQ	SAMPLE DATA NO. PATIENTS	%	NO. PROCEDURES	RATES PER VISIT	PER PAT. YR.
705 Seat Belt Education	Done	0	0	0	.00	0.0

J. Other Criteria

LAB TESTS ALSO USED IN CRITICAL CRITERIA A

DATA ITEMS	REQ	SAMPLE DATA NO. PATIENTS	%	NO. PROCEDURES	RATES PER VISIT	PER PAT. YR.
021 BUN	Value	41	79	43	.26	3.9
023 Serum Uric Acid	Value	42	81	44	.27	4.0
024 Serum Cholesterol	Value	39	75	42	.25	3.8
026 Urinalysis	Value	41	79	52	.31	4.8
027 CBC	Value	42	81	43	.26	3.9
028 Hematocrit	Value	38	73	38	.23	3.5
029 Fastial Blood Sugar	Value	12	23	12	.07	1.1
030 2 Hr pc Blood Sugar	Value	2	4	2	.01	0.2
031 Random Blood Sugar	Value	34	65	40	.24	3.7
038 Pap Smear	Value	22	42	25	.15	2.3
039 Calcium	Value	32	62	33	.20	3.0
040 Phosphorous	Value	32	62	33	.20	3.0
041 Total Protein	Value	32	62	33	.20	3.0

TABLE 8 (CONT'D)

042 Serum Alb.	Value	32	62	33	.20	3.0
043 Bilirubin	Value	32	62	33	.20	3.0
044 Alk. Phosph.	Value	40	77	42	.25	3.8
045 LDH	Value	32	62	33	.20	3.0
046 SGOT	Value	40	77	42	.25	3.8

OTHER ITEMS

		SAMPLE DATA			RATES	
DATA ITEMS	REQ	NO. PATIENTS	%	NO. PROCEDURES	PER VISIT	PER PAT. YR.
002 Weight	Value	50	96	116	.69	10.6
003 Systolic BP	Value	52	100	129	.77	11.8
004 Diastolic BP	Value	52	100	129	.77	11.8
005 Optic Fundi	Done	23	44	23	.14	2.1
006 EKG	Done	21	40	22	.13	2.0
010 Chest X-Ray	Done	11	21	11	.07	1.0
047 Tonometry (R)	Done	19	36	19	.11	1.7
048 Tonometry (L)	Done	20	38	20	.12	1.8
049 Heart Exam	Done	48	92	58	.35	5.3
050 Rectal Exam	Done	34	65	36	.22	3.3
051 Procto. Exam	Done	5	10	5	.03	0.5
052 Sigmold	Done	4	8	5	.03	0.5
053 Family History	Done	42	81	44	.27	4.0
054 Sexual History	Done	27	52	39	.23	3.6
055 Rev. of Systems	Done	39	75	40	.24	3.7
061 Allergies Noted	Done	43	83	48	.29	4.4
062 Current Meds.	Done	39	75	64	.38	5.9

TABLE 8 (CONT'D)

064 Marital Status	Done	38	73	39	.23	3.6
065 Work History	Done	29	56	32	.19	2.9
070 Abdominal Exam	Done	50	96	60	.36	5.5
071 Breast Exam	Done	34	65	34	.20	3.1
072 Testicular Exam	Done	15	29	15	.09	1.4
090 Screening Panel	Done	37	71	42	.25	3.8
706 Exercise Counselling	Done	0	0	0	.00	0.0
800 Revisit	Done	32	62	53	.32	4.9
801 Consult	Done	9	17	10	.06	0.9
802 Hosp.	Done	3	6	3	.02	0.3
803 Other Dispos.	Done	14	27	20	.12	1.8

DESCRIPTION OF VARIATION DATA

Variations were identified for each critical criteria item by topic and site. Table 9 shows these variations as percentage deviations from full compliance. Thus, whether the critical criteria involve a positive requirement as in the case of "Blood Sugar" or a negative requirement as in the case of "No Hospitalization," low variation percents indicate good compliance and high variation percents indicate poor compliance. As previous studies have indicated, use of critical criteria can result in large variation rates. Therefore, until the justification procedures are complete, the variation rate per site should not be interpreted as a reflection of quality of care.

Deficiencies are also shown as percentage deviations from full compliance for those items reviewed by the practices. Deficiency rates, presented in Table 9 are not reliable since a variety of techniques were used to justify variation from critical criteria. In some instances, review occurred for only a small sample of cases or by an incomplete set of participating physicians.

Mean variation rates are figured on the basis of total data for all sites and are not the average of the ten site variation rates. Combined variation rates for all criteria together for each topic ranged from 23% variations for Chest Pain criteria to 57% for Preventive Care, Adult, and averaged 44% variation for all topics. The mean variation rates by topic are given in Table 10. Mean rates are not given for deficiencies because of the large number of variations that were not reviewed by the practices.

Variation rates by site are shown in Table 11. These ranged from 32% to 55% with a mean rate of 44%. Site 6 and site 9 which, as indicated previously, showed 31 physicians between them, nevertheless came up with quite different variation rates: 52% for site 6 and 44% for site 9. This suggests that differences in variation rates may be more effected by the patient mix at a particular site than by the physician involved.

TABLE 9A. CRITICAL CRITERIA VARIATIONS AND DEFICIENCIES BY SITE

Shown as Percentage Deviations from Full Compliance with each Criterion

1. DIABETES MELLITUS

Sites

CRITERIA	1		2		3		4		5		6		7		8		9		10		Mean Variations	
	Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def	
1. Blood Sugar	67	22	63	0	61	27	44	*	56	31	62	37	29	0	48	*	43	12	79	*	51	*
2. Visits	20	*	6	0	34	14	21	*	59	34	33	10	43	3	47	*	33	17	40	*	36	*
3. No Wt. Gain	20	*	6	0	16	5	20	*	30	20	30	*	17	0	25	*	32	*	19	*	23	*
4. Diet	0	*	0	0	6	3	2	*	0	0	2	0	4	2	5	*	7	*	0	*	3	*
5. No Hosp.	17	*	38	0	34	9	24	*	26	3	25	*	21	2	21	*	31	*	40	*	26	*

*Variations not reviewed by practice.

TABLE 9B. CRITICAL CRITERIA VARIATIONS AND DEFICIENCIES BY SITE

Shown as Percentage Deviations from Full Compliance with each Criterion

2. HYPERTENSION

Sites

CRITERIA	1		2		3		4		5		6		7		8		9		10		Mean Variations	
	Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def	
1. B/P	29	4	23	0	33	*	40	2	31	16	62	41	50	35	43	6	33	19	30	*	38	*
2. Visits	32	1	9	0	32	*	21	2	62	29	48	10	53	36	45	9	50	16	46	*	42	*
3. Fundoscopic	58	19	45	5	38	*	63	32	32	16	49	15	78	61	47	25	38	20	28	*	47	*
4. Drugs	5	0	14	0	1	*	8	1	3	1	3	0	7	3	3	0	4	2	5	*	5	*
5. Urinalysis	23	6	68	14	40	*	26	11	31	25	22	10	36	24	27	11	32	16	26	*	30	*
6. Ser. Pot.	21	5	50	14	88	*	73	45	15	12	26	10	70	55	32	19	25	17	23	*	42	*
7. EKG	33	*	*	*	49	*	62	*	54	*	40	*	83	*	46	*	51	*	47	*	56	*

*Variations not reviewed by practice.

TABLE 9C. CRITICAL CRITERIA VARIATIONS AND DEFICIENCIES BY SITE

Shown as Percentage Deviations from Full Compliance with each Criterion

3. ISCHEMIC HEART DISEASE

	Sites																				
CRITERIA	1		2		3		4		5		6		7		8		9		10		Mean Variations	
	Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def	
1. Smoking Hx	43	*	23	20	78	66	72	*	68	16	75	19	85	54	56	*	60	16	62	*	65	*
2. Smoking Educ	51	*	53	*	88	78	84	*	81	20	88	28	90	63	90	*	66	24	73	*	76	*
3. EKG	37	*	67	7	28	22	44	*	28	7	28	3	79	38	11	*	16	8	20	*	32	*
4. No M.I.	4	*	0	0	16	5	4	*	8	7	0	0	6	2	1	*	20	10	4	*	7	*
5. No Card. Dth.	2	*	7	*	2	*	3	*	0	0	0	0	4	4	1	*	12	4	1	*	3	*
6. Visits	20	*	20	7	21	12	12	*	46	12	22	*	27	10	26	*	42	20	52	*	31	*

*Variations not reviewed by practice.

TABLE 9D. CRITICAL CRITERIA VARIATIONS AND DEFICIENCIES BY SITE

Shown as Percentage Deviations from Full Compliance with each Criterion

4. ANXIETY/DEPRESSION

Sites

CRITERIA	1		2		3		4		5		6		7		8		9		10		Mean Variations	
	Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def	
1. Psych/Couns.	25	0	17	0	50	*	57	*	11	*	46	*	69	*	64	*	39	0	90	*	45	*
2. No Sed.	1	*	0	0	1	*	7	*	4	*	3	*	12	*	2	*	8	1	0	*	4	*
3. Follow Up	62	0	52	0	50	*	75	*	54	*	73	*	93	*	82	*	68	5	45	*	66	*
4. No Suicide	0	*	4	4	0	*	4	*	2	*	4	*	1	*	3	*	2	1	0	*	2	*

*Variations not reviewed by practice.

TABLE 9E. CRITICAL CRITERIA VARIATIONS AND DEFICIENCIES BY SITE

Shown as Percentage Deviations from Full Compliance with each Criterion

5. CHEST PAIN

	CRITERIA	Sites 1		2		3		4		5		6		7		8		9		10		Mean Variations	
		Var/	Def	Var/	Def	Var/	Def	Var/	Def	Var/	Def	Var/	Def	Var/	Def	Var/	Def	Var/	Def	Var/	Def	Var/	Def
1.	Past Hx	41	*	42	0	48	*	66	*	46	8	74	5	100	*	85	*	67	5	38	*	58	*
2.	Heart Exam	24	*	0	0	14	*	14	*	21	4	47	5	32	*	10	*	16	1	29	*	19	*
3.	Ch/Lng Exam	16	*	0	0	9	*	14	*	8	1	37	5	42	*	10	*	9	1	5	*	12	*
4.	B/P Values	4	*	0	0	5	*	0	*	5	*	5	0	0	*	5	*	12	0	24	*	6	*
5.	Assmnt. Follow Up	47	*	42	0	21	*	23	*	9	3	21	5	42	*	5	*	19	0	14	*	21	*

*Variations not reviewed by practice.

TABLE 9F. CRITICAL CRITERIA VARIATIONS AND DEFICIENCIES BY SITE

Shown as Percentage Deviations from Full Compliance with each Criterion

6. URINARY TRACT INFECTION

	Sites																				
CRITERIA	1		2		3		4		5		6		7		8		9		10		Mean Variations
	Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def
1. Hx of UTI	65	3	19	7	68	*	64	*	44	5	88	19	85	*	62	*	54	4	*	*	58	*
2. Urinalysis Before Treat.	11	*	0	0	22	*	10	*	6	0	31	0	13	*	15	*	3	*	*	*	11	*
3. Follow Up	37	*	11	0	42	*	28	*	45	5	31	0	74	*	32	*	23	0	*	*	36	*
4. UR Cult.	66	*	88	85	87	*	78	*	67	11	69	0	88	*	80	*	71	2	*	*	76	*
5. Treatment	5	*	25	0	25	*	17	*	8	*	33	0	0	0	0	*	9	0	*	*	8	*

*Variations not reviewed by practice.

TABLE 9G. CRITICAL CRITERIA VARIATIONS AND DEFICIENCIES BY SITE

Shown as Percentage Deviations from Full Compliance with each Criterion

7. ARTHRITIS

Sites

CRITERIA	1		2		3		4		5		6		7		8		9		10		Mean Variations	
	Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def	
1. Past Hx	66	2	39	0	82	*	78	*	75	*	93	7	97	*	86	*	96	5	85	*	81	*
2. No Steroids	3	0	0	0	11	*	21	*	7	*	17	0	25	*	8	*	18	0	39	*	14	*
3. Aspirin, Anti-Infl.	80	5	50	0	72	*	82	*	65	*	89	11	35	*	78	*	59	12	82	*	71	*
4. Phenyl/ULC	20	0	0	0	20	*	33	*	38	*	0	0	73	*	50	*	25	*	30	*	86	*
5. No Hosp.	1	*	0	0	5	*	8	*	4	*	10	0	5	*	5	*	5	0	5	*	5	*

*Variations not reviewed by practice.

TABLE 9H. CRITICAL CRITERIA VARIATIONS AND DEFICIENCIES BY SITE

Shown as Percentage Deviations from Full Compliance with each Criterion

8. PREVENTIVE CARE, ADULT

	Sites																					
CRITERIA	1		2		3		4		5		6		7		8		9		10		Mean Variations	
	Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def		Var/Def	
1. Lab Results Recognized	4	*	33	*	24	2	29	*	14	2	100	17	44	7	24	*	33	3	26	*	25	*
2. Tet Hx	41	2	44	*	69	60	67	*	19	4	100	33	74	44	42	*	46	29	97	*	53	*
3. Tet Immun.	49	6	92	*	84	76	69	*	72	14	83	50	74	59	43	*	55	32	100	*	66	*
4. Smoking Hx	7	0	11	*	13	13	70	*	12	3	67	17	33	33	7	*	50	15	57	*	38	*
5. Smoking Educ	30	2	28	*	36	36	81	*	41	7	67	33	41	33	32	*	72	39	74	*	56	*
6. Alcohol Hx	9	0	17	*	13	13	70	*	14	3	67	17	26	19	6	*	59	15	63	*	39	*
7. Alcohol Educ	25	1	53	*	27	20	81	*	32	5	67	17	70	52	41	*	78	31	74	*	58	*
8. Seat Belt Hx	30	2	97	*	13	13	100	*	41	7	100	100	100	100	100	*	99	85	89	*	78	*
9. Seat Belt Educ	78	6	100	*	89	85	100	*	97	14	100	100	100	100	100	*	99	85	91	*	96	*

*Variations not reviewed by practice.

TABLE 10. MEAN VARIATION RATES BY TOPIC

Topic	Mean Variation Rate
1. Diabetes Mellitus	28%
2. Hypertension	37%
3. Heart Disease	36%
4. Anxiety/Depression	29%
5. Chest Pain	23%
6. UTI	38%
7. Arthritis	51%
8. Preventive Care, Adult	57%
ALL TOPICS	44%

TABLE 11. MEAN VARIATION RATES BY SITE

Site	Mean Variation Rate
1	32%
2	33%
3	41%
4	48%
5	36%
6	52%
7	55%
8	40%
9	44%
10	49%
ALL SITES	44%

SECTION VI

RESOURCES AND COST

INTRODUCTION AND METHOD

This section presents the personnel resources used by SCPPSRO in planning, developing and operating an ambulatory review program from October 1, 1976 to June 30, 1978.

Personnel resources for specific functions are analyzed to present trends over time and to provide some indication of the resources required by review organizations during implementation of ambulatory review.

To develop accurate information on resource use, SCPPSRO collected personnel hours spent on specific activities and forwarded the information to HCMS. Three conditions suggested special procedures for recording and collecting personnel hours:

1. Having SCPPSRO personnel record their hours was likely to increase the face validity of the information collected.
2. Vouchered cost information was not considered reliable because of the variety of PSRO procedures used in billing the Health Standards and Quality Bureau (HSQB).
3. Vouchered personnel information frequently does not contain volunteer physician time and overtime which are required for an accurate estimate of resource use.

In collecting resource information, HCMS and the PSRO discussed systematic recording procedures, developed data compilation procedures and defined specific terms and categories.

Participants in the demonstration project were asked to describe their ambulatory review activities and record the number of hours spent on a daily or weekly basis. During initial discussions, HCMS and the PSRO developed rigorous procedures for collection of personnel data, and a monthly activity log with a standard format was designed to record information, SCPPSRO decided to use their own logs. The logs and all minutes of meetings were forwarded to HCMS on a monthly basis.

CATEGORIZATION AND COMPILATION OF RESOURCE DATA

To facilitate the compilation and presentation of data, HCMS classified the information contained in the SCPPSRO logs into a standard format composed of three personnel categories:

1. Physicians--including physicians working either in staff capacity or as special panel consultants
2. Management/Technical--a) Management: all personnel assigned the responsibility to administer the project or to assist in managing the project, and b) Technical: personnel principally engaged in technical design of the project, analysis of the data, providing liaison with data processing, etc.
3. Data Collection/Clerical--a) Data Collection: those personnel retrieving data from medical record charts, transforming and coding data for subsequent processing, etc. and b) Clerical: secretarial personnel whose duties are typing, filing and generally supporting the project.

Each participant in the demonstration project was classified into one of the above three categories depending on type of work performed during the reporting periods. Where the choice between categories 2 and 3 was not clear, persons receiving $7 or more per hour were assigned to the management/technical category and those receiving less than $7 per hour to the data collection/clerical category.

Eight major functional categories were identified as spanning the entire work effort of the project. The eight functions are:

1. Planning and Administration--includes activities relating to system-wide staffing and coordination, system design and approach and the administrative support activities that facilitate review system implementation.
2. Topic Selection--work related to identifying problems or topics for review and the selection of those topics likely to produce the greatest benefit
3. Criteria Development--development of criteria related to the problem or topic under study which can be measured or compared by data being collected
4. Data Collection (includes abstracting)--activity of collecting information from required data sources.
5. Coding--activity of converting abstracted data to a format acceptable for computer entry. This includes coding of diagnoses and procedures.
6. Data Processing and Analysis--activity of compiling, organizing and displaying data in preparation for professional interpretation. The processing and analysis can be accomplished manually or by machine.
7. Review and Decision-Making--professional (physician or other staff) examination and interpretation of processed information.
8. Feedback and Intervention--providing to those individuals/facilities/groups results of analysis and/or review and decision-making.

HCMS allocated the personnel hours reported to the appropriate function by personnel category. Some interpretive judgments were made in determining which function most closely correlated to the work done as reported by the activity logs. One HCMS staff member allocated activities to the appropriate category, and two other staff members reviewed the process for consistency.

Information used in assigning resources to appropriate functions and categories was taken solely from data entered by personnel on the activity log. Usually PSRO personnel described an activity in detail and no judgment was required in assigning it to a function.

SCPPSRO subcontract personnel were allocated in the same manner as SCPPSRO personnel and are included in the aggregated data shown in the various tables and figures.

PRESENTATION OF RESOURCE DATA

The distribution of total hours expended by the project for SCPPSRO and subcontractor personnel by personnel category and function is shown in Table 12. The percent of resources used for each of the eight functions is shown in total and separately by personnel category. Figure 3 is a graphic representation of this table. In this graph, the percent of total hours worked by members of each of the three personnel categories is represented horizontally and the percent of hours used for each functional category is represented vertically. Areas within the bars are proportional to the number of hours expended by any one personnel category for any one function.

TABLE 12: DISTRIBUTION OF TOTAL PERSONNEL HOURS BY FUNCTION AND PERSONNEL CATEGORY

	PERSONNEL CATEGORY							
FUNCTION	MD	(%)	MGMT/ TECHNICAL	(%)	DATA/ CLERICAL	(%)	TOTAL	(%)
Planning and Administration	324	(44)	2,595	(41)	1,368	(9)	4,287	(19)
Topic Selection	13	(2)					13	(0)
Criteria Development	114	(15)	53	(1)	46	(0)	213	(1)
Data Collection, Abstracting	181	(24)	819	(13)	8,620	(56)	9,620	(43)
Coding					1,142	(8)	1,142	(5)
Data Processing	20	(3)	2,595	(41)	3,521	(23)	6,136	(28)
Review and Decision Making	28	(4)	181	(3)	61	(0)	270	(1)
Feedback and Intervention	58	(8)	89	(1)	563	(4)	710	(3)
TOTAL	738	(100)	6,332	(100)	15,321	(100)	22,391	(100)
PERCENT	3%		28%		69%		100%	

FIGURE 3

DISTRIBUTION OF TOTAL PERSONNEL HOURS BY FUNCTION WITHIN PERSONNEL CATEGORY

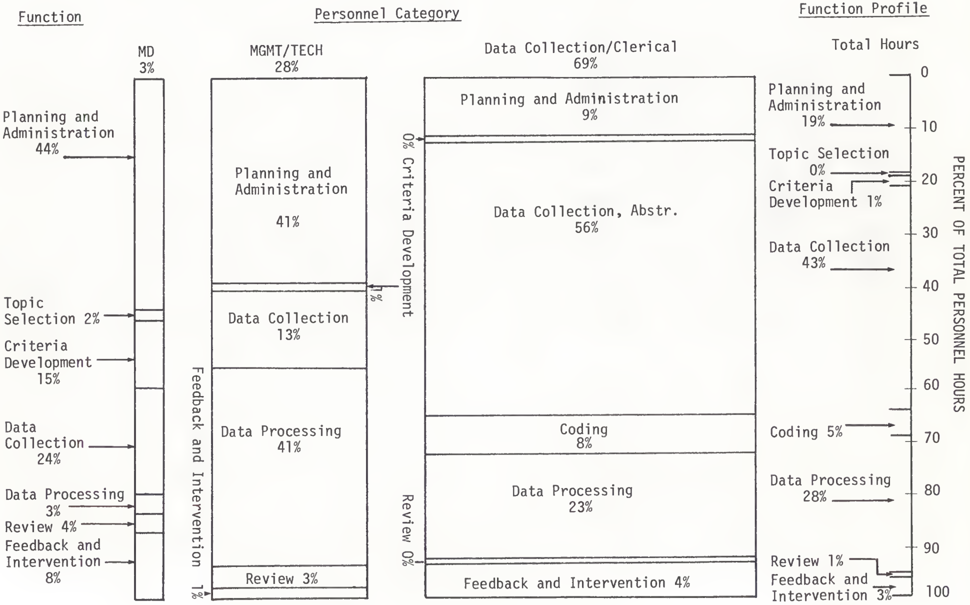


TABLE 13: DISTRIBUTION OF PERSONNEL HOURS FOR FUNCTIONS BY CALENDAR QUARTER AND PERSONNEL CATEGORY

		PERSONNEL CATEGORY			
FUNCTION	CALENDAR QUARTER	MD (%)	MGMT/ TECHNICAL (%)	DATA/ CLERICAL (%)	TOTAL (%)
Planning and Administration	10-12/76	82 (25)	511 (20)	189 (14)	782 (18)
	1-3 /77	60 (19)	384 (15)	378 (27)	822 (19)
	4-6	48 (15)	318 (12)	121 (9)	487 (12)
	7-9	49 (15)	406 (16)	107 (8)	562 (13)
	10-12	38 (12)	315 (12)	260 (19)	613 (14)
	1-3 /78	30 (9)	349 (13)	180 (13)	559 (13)
	4-6	17 (5)	312 (12)	133 (10)	462 (11)
	TOTAL	324 (100)	2,595 (100)	1,368 (100)	4,287 (100)
	PERCENT	8%	60%	32%	100%
Topic Selection	10-12/76	9 (69)			9 (69)
	1-3 /77	1 (8)			1 (8)
	4-6				
	7-9				
	10-12				
	1-3 /78	3 (23)			3 (23)
	4-6				
	TOTAL	13 (100)			13 (100)
	PERCENT	100%			100%
Criteria Development	10-12/76	24 (21)	11 (21)		35 (17)
	1-3 /77	68 (59)	9 (17)		77 (36)
	4-6	18 (16)	10 (19)		28 (13)
	7-9	3 (3)	2 (4)		5 (2)
	10-12		5 (9)	21 (46)	26 (12)
	1-3 /78	1 (1)		25 (54)	26 (12)
	4-6		16 (30)		16 (8)
	TOTAL	114 (100)	53 (100)	46 (100)	213 (100)
	PERCENT	53%	25%	22%	100%
Data Collection	10-12/76	12 (7)			12 (0)
	1-3 /77	100 (55)	285 (35)	1,807 (21)	2,192 (23)
	4-6	57 (31)	255 (31)	2,560 (30)	2,872 (30)
	7-9	12 (7)	238 (29)	2,102 (24)	2,352 (24)
	10-12		2 (0)	1,117 (13)	1,119 (12)
	1-3 /78		3 (0)	564 (7)	567 (6)
	4-6		36 (5)	470 (5)	506 (5)
	TOTAL	181 (100)	819 (100)	8,620 (100)	9,620 (100)
	PERCENT	2%	8%	90%	100%

TABLE 13 (CONT'D)

FUNCTION	CALENDAR QUARTER	PERSONNEL CATEGORY			
		MD (%)	MGMT/ TECHNICAL (%)	DATA/ CLERICAL (%)	TOTAL (%)
Coding	10-12/76				
	1-3 /77			283 (25)	283 (25)
	4-6			254 (22)	254 (22)
	7-9			175 (15)	175 (15)
	10-12			91 (8)	91 (8)
	1-3 /78			150 (13)	150 (13)
	4-6			189 (17)	189 (17)
	TOTAL			1,142 (100)	1,142 (100)
	PERCENT			100%	100%
Data Processing	10-12/76				
	1-3 /77		303 (12)	215 (6)	518 (8)
	4-6		497 (19)	196 (6)	693 (11)
	7-9		488 (19)	465 (13)	953 (16)
	10-12	6 (30)	436 (17)	959 (27)	1,401 (23)
	1-3 /78	11 (55)	564 (21)	977 (28)	1,552 (25)
	4-6	3 (15)	307 (12)	709 (20)	1,019 (17)
	TOTAL	20 (100)	2,595 (100)	3,521 (100)	6,136 (100)
	PERCENT	0%	42%	58%	100%
Review	10-12/76				
	1-3 /77				
	4-6				
	7-9		34 (19)		34 (13)
	10-12		70 (39)		70 (26)
	1-3 /78	15 (54)	51 (28)	53 (87)	119 (44)
	4-6	13 (46)	26 (14)	8 (13)	47 (17)
	TOTAL	28 (100)	181 (100)	61 (100)	270 (100)
	PERCENT	10%	67%	23%	100%
Feedback and Intervention	10-12/76				
	1-3 /77				
	4-6				
	7-9				
	10-12	36 (62)	66 (74)	155 (28)	257 (36)
	1-3 /78	16 (28)		292 (52)	308 (43)
	4-6	6 (10)	23 (26)	116 (20)	145 (21)
	TOTAL	58 (100)	89 (100)	563 (100)	710 (100)
	PERCENT	8%	13%	79%	100%

APPENDIX A

SOUTHCENTRAL PENNSYLVANIA PSRO CRITICAL CRITERIA

AND

AMBULATORY CARE DATA BASE

APPENDIX A
SOUTHCENTRAL PENNSYLVANIA PSRO
CRITICAL CRITERIA

DIABETES MELLITUS

1. Three visits per year
2. Fasting blood sugar less than 200 mg/100 ml or random blood glucose less than 250 mg/100 ml
3. Weight loss (if overweight)
4. Diet therapy before oral hypoglycemics
5. Hospitalization (9% standard)

HYPERTENSION

1. Blood pressure not greater than 90 mmHG diastolic on any two consecutive visits beginning two months after onset of problem. Must have at least two diastolic readings of 90 diastolic or less.
2. Three visits per year
3. Funduscopic examination
4. No specific antihypertensive drug until diuretic or propranolol started
5. Urinalysis
6. Serum potassium test if on diuretic

CHRONIC ISCHEMIC HEART DISEASE

1. Smoking history recorded
2. Smoking patient education (if patient smokes)
3. At least one EKG in any one-year period
4. Myocardial infarction (0% standard)
5. Cardiac death (0% standard)
6. Three visits per year

ANXIETY AND/OR DEPRESSION

1. Counseling or psychotherapy
2. No sedative medication if problem is depression
3. Follow-up appointment mentioned at each visit
4. No suicide attempt or success since treatment started

CHEST PAIN

1. Past medical history documented
2. Heart examination documented
3. Lung examination documented
4. Blood pressure recorded
5. Definitive diagnosis or reappointment scheduled

ARTHRITIS

1. History of presence or absence of peptic ulcer or G.I. bleeding
2. Systemic steroid administration
3. Aspirin prescription before other anti inflammatory agents (unless allergic)
4. If recent history (1-2 years) of ulcer or G.I. bleeding, no phenylbutazone or indomethacin or naproxen
5. No hospitalization for arthritis

CRITICAL CRITERIA - CONTINUED

PREVENTIVE CARE - ADULT

1. All abnormal laboratory values recognized
2. Tetanus history documented
3. Plans for incomplete tetanus immunization
4. Smoking history
5. Smoking patient education (unless patient doesn't smoke)
6. Alcohol intake history
7. Alcohol intake patient education (unless patient doesn't drink)
8. Seat belt use history
9. Seat belt patient education (unless patient always uses)

URINARY TRACT INFECTION (UTI)

1. Documentation of presence or absence of previous UTI
2. Urinalysis precedes treatment
3. Definite appointment or referral made at first visit
4. Urine culture or gram stain one week or more after discontinuation of treatment
5. Treatment for at least two weeks

SOUTHCENTRAL PENNSYLVANIA PSRO AMBULATORY CARE DATA BASE

TOPICS	STUDY TIME FRAME
1. Diabetes Mellitus	2 years
2. Hypertension	2 years
3. Ischemic Heart Disease	2 years
4. Anxiety and/or Depression	2 years
5. Chest Pain	8 months
6. Arthritis	2 years
7. Preventive Care - Adult	7 months
8. U.T.I.	4 months

DATA ELEMENT*	TOPIC							
	1	2	3	4	5	6	7	8
PATIENT HISTORY								
1. Family history			x		x	x	x	
2. Sexual history							x	
3. Smoking history							x	
4. Alcohol history							x	
5. Immunization history							x	
6. Last tetanus toxoid date							x	
7. Allergies noted							x	
8. Current medications noted							x	
9. Use of seat belt noted							x	
10. Marital status							x	
11. Occupational history							x	
12. Impotence noted	x		x					
13. Mention obesity	x							
14. Prior suicide try				x				
15. Past history (for diagnosis)			x		x			x
16. History of chest pain			x		x			
17. History of ulcer						x		
18. GI bleeding last 2 years						x		
19. Peptic ulcer last 2 years						x		
20. Exercise history			x					
21. Recurrent U.T.I.								x
22. Types of U.T.I. specified								x
EXAM								
1. Height*	x	x	x				x	
2. Weight*	x	x	x				x	
3. Systolic BP*	x	x	x	x	x		x	
4. Diastolic BP*	x	x	x	x	x		x	
5. Optic Fundi	x	x					x	
6. Heart exam					x		x	
7. Rectal exam							x	
8. Peripheral vascular status	x							
9. Neurological exam	x							
10. Chest wall, lung exam					x			

*An asterisk indicates that values are recorded for the tests/procedures

	TOPIC							
DATA ELEMENTS (CONT.)	1	2	3	4	5	6	7	8
LABORATORY								
1. 4 Hour PP blood glucose*	x				x			
2. Glucose tolerance*	x				x			
3. Serum potassium*		x						
4. Serum uric acid*		x					x	
5. BUN*	x	x					x	
6. Serum creatinine*	x	x						
7. Serum cholesterol*	x	x	x		x		x	
8. Triglycerides*	x	x	x					
9. UA*	x	x	x		x	x	x	x
10. CBC/Hemoglobin*	x	x		x	x	x	x	
11. Fasting blood sugar*	x	x			x		x	
12. 2 Hour PP blood sugar*	x	x			x		x	
13. Random blood sugar*	x	x			x		x	
14. Plasma renin*		x						
15. Urinary catecholemines*		x						
16. Urinary plasma aldosterone*		x						
17. Urinary plasma corticosteroids*		x						
18. Pap smear*							x	
19. Calcium *							x	
20. Phosphorus*							x	
21. Total protein*							x	
22. Serum albumin*							x	
23. Bilirubin*							x	
24. Alkaline phosphatase*							x	
25. LDH*							x	
26. SGOT*							x	
27. T-4*				x				
28. PBI*				x				
29. Sedation rate*						x		
30. Rh Factor *						x		
31. Antinuclear antibody*							x	
32. Screening panels	x		x	x				
33. UA with microscopic *								x
34. Urine culture and sensitivity*								x
35. Gram stain*								x
36. Urine screen*								
X-RAY								
1. Bone x-ray*						x		
2. Chest x-ray*	x	x	x		x		x	
3. IVP*		x						x
4. Renal arteriogram *		x						
5. Voiding cystourethrogram*								x
6. Retrograde pyelogram*								x

*An asterisk indicates that values are recorded for the tests/procedures

DATA ELEMENTS (CONT.)	TOPICS 1	2	3	4	5	6	7	8
DRUGS								
1. Diuretics		x	x					
2. Propanolol		x	x					
3. Other antihypertensives		x						
4. Oral contraceptives		x						
5. Potassium supplements		x						
6. Digitalis		x	x					
7. Ataractics, tranquilizers		x		x	x			
8. Sedatives		x		x	x			
9. Hypoglycemics		x						
10. Antidepressives				x				
11. Antimanic drugs				x				
12. Skeletal muscle relaxant					x			
13. Salicylates					x	x		
14. Analgesics					x	x		
15. Narcotics					x	x		
16. Phenylbutazone					x	x		
17. Indomethacin					x	x		
18. Other anti-inflammatory, naproxen						x		
19. Systemic corticosteroids						x		
20. Intra-articular/lesional cortico.						x		
21. Gold preparations						x		
22. Antimalarials						x		
23. Nonsalicylates						x		
24. Antibiotics								x
25. Sulfanamides								x
26. Anti-infectious agents NOS								x
OTHER THERAPEUTICS								
1. Vasodilators			x					
2. Cardiac surgery			x					
3. Physical therapy						x		
4. Tetanus toxoid							x	
OTHER DIAGNOSTIC PROCEDURES								
1. EKG*	x	x						
2. Exercise EKG*			x					
3. Tonometry							x	
4. Visual acuity	x							
5. Proctoscopy							x	
6. Sigmoidoscopy							x	
7. Review of systems							x	
8. Cystoscopy								x

*An asterisk indicates that values are recorded for the tests/procedures

DATA ELEMENTS (CONT.)	TOPICS							
	1	2	3	4	5	6	7	8
ASSESSMENTS/OUTCOMES								
1. Mention anxiety				x				
2. Mention depression				x				
3. Subsequent diagnosis				x				
4. Type of arthritis specified					x			
5. Suicide attempt during treatment				x				
6. Suicide success during treatment				x				
7. Myocardial infarct			x					
8. Death			x					
PATIENT EDUCATION								
1. Diet instruction	x	x	x					
2. Salt restriction		x						
3. Smoking education			x				x	
4. Alcohol education							x	
5. Seatbelt education							x	
6. Exercise counseling							x	
7. Other education	x							
8. Psychologist or counseling				x				
PATIENT DISPOSITION								
1. Consultation	x	x	x	x	x	x	x	x
2. Hospitalization	x	x	x	x	x	x	x	x
3. Other	x	x	x	x	x	x	x	x
4. Specified time (revisit)	x	x	x	x	x	x	x	x

ADMINISTRATIVE DATA ELEMENTS - ALL TOPICS

1. Patient identification
2. Birth date
3. Sex
4. Payment status
5. Provider identification
6. Facility identification
7. Date of visit

APPENDIX B

SOUTHCENTRAL PENNSYLVANIA PSRO DISPLAY FOR SITE INTERVENTION--CHEST PAIN

APPENDIX B

SOUTHCENTRAL PENNSYLVANIA
Professional Standards Review Organization

Medical Arts Building, Suite 201
890 Poplar Church Road
Camp Hill, PA 17011

717 - 761-5085

SITE:

SOUTHCENTRAL PENNSYLVANIA PSRO

AMBULATORY CARE REVIEW DEMONSTRATION PROJECT

THE DATA DISPLAY FOR SITE INTERVENTION

CHEST PAIN

AMCRO 5/78

Serving: Adams, Berks, Cumberland, Dauphin, Franklin, Fulton, Lebanon, Lancaster, Perry, Schuylkill, York Counties

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CHEST PAIN

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AMCRO DATA DISPLAY

AGE/SEX DISTRIBUTION

I. Study: Chest Pain Ages included in this study: All ages

II. This Practice Site Site _____ Total patients _____ Total male _____ Total Female _____

DISTRIBUTION

	0-4 years		5-9 years		10-14 yrs		15-24 yrs		25-34 yrs		35-44 yrs		45-54 yrs		55-64 yrs		65 + up	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
#																		
%																		

III. Project Total Total patients 483 Total male 265 Total female 218

DISTRIBUTION

	0-4 years		5-9 years		10-14 yrs		15-24 yrs		25-34 yrs		35-44 yrs		45-54 yrs		55-64 yrs		65 + up	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
#					1	4	25	22	52	36	54	34	53	42	36	30	44	50
%					.002	1%	5%	5%	11%	7%	11%	7%	11%	9%	7%	6%	9%	10%

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AMCRO CHEST PAIN STUDY
STUDY DESCRIPTION AND SUMMARY OF CRITICAL CRITERIA

I. Study Description

A. Problem - Patients included in this study had episodic or acute chest pain. Patients with chronic or longstanding chest pain were excluded from the study.

B. Data Collection Period - Information for an eight month period was collected from medical records. Procedures and processes of care which occurred for six months preceding the date the patient was seen by the practice for acute chest pain and two months following that visit were recorded.

C. Patient Populations - Numbers of patients in this study ranged from 12 to 97 patients at the ten participating practice sites. The average number of patients was 48; the median number of patients was 43.

II. The Critical Criteria for the Chest Pain Study are:

A. Criterion 1 - Past Medical History - In order to meet this criterion, the patient's medical history must be documented within the medical record any time within the eight month study period.

B. Criterion 2 - Heart Examination - In order to meet this criterion, there must be documented evidence of examination of the heart on or after the date the patient was treated for acute or episodic chest pain.

C. Criterion 3 - Chest Wall or Lung Examination - In order to meet this criterion, there must be documented evidence of chest wall or lung examination on or after the date the patient was treated for acute or episodic chest pain.

D. Criterion 4 - Blood Pressure Values - In order to meet this criterion, there must be blood pressure values documented on or after the date the patient was treated for acute or episodic chest pain.

E. Criterion 5 - Assessment & Follow-up - In order to meet this criterion, there must be documented evidence of assessment or follow-up of the problem on or after the date the patient was treated for acute or episodic chest pain. A diagnosis must be made or follow-up care such as a specific reappointment interval, referral to a consultant or hospitalization must be documented.

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DESCRIPTION OF THE VARIATION RATES AND DISPLAYS

AMCRO STUDY: Chest Pain

The displays that follow deal with percentages of variations from established critical criteria for each site and each physician or health care provider group within the site.

Practice Variation Display - Definitions

1. Variation - A variation represents a patient who did not satisfy the critical criterion during the initial screen. Variations do not necessarily represent deficiencies in patient care. The practice physicians, through medical record review and analysis may explain (justify) the variations.
2. Variation Rate - Percentage of patients who did not satisfy the critical criterion.
3. Project Total - All patients from all sites and the percentage of that total who varied from the critical criteria.
4. This Practice - The percentage of all patients in the study from the indicated practice site who varied from the critical criteria.
5. Provider Display - The percentage of patients from this practice site who varied from the critical criteria and the identified provider.
6. Identified Provider - Health care provider or team who saw the patient most during the study period.
7.

CRITICAL CRITERIA VARIATION DISTRIBUTION DEFINITIONS

1. Variation Distribution - The range (from low to high) of percentages of variations among the ten participating practices.
2. Project Total - All patients from all sites and the percentage of that total who varied from the critical criteria.

I. PRACTICE VARIATION DISPLAY- CHEST PAIN STUDY

SITE # TOTAL PTS. IN STUDY 483 PTS., THIS SITE

CRITERIA	# PTS	PROJECT TOTAL	THIS PRACTICE	Pts	Provider #		Provider #		Provider #		Provider #		Provider #		Provider #		Provider #		Provider #		Provider #	
1. Past Medical Hx Documented		58%																				
2. Heart Exam Recorded		19%																				
3. Chest Wall or Lung Exam Noted		12%																				
4. Blood Pressure Recorded		6%																				
5. Subsequent Diag.or Follow up Noted		21%																				

NOTE: FOR DESCRIPTIONS AND DEFINITIONS OF THESE DISPLAYS, REFER TO PRECEDING PAGE

II. VARIATION DISTRIBUTION - CRITICAL CRITERIA- CHEST PAIN STUDY

SITE #______ Total Patients in Study 483 Patients, this site______

NOTE: The Variation Rates for this practice are circled.

CRITERIA	RANKING - ALL PRACTICE SITES - LOWEST TO HIGHEST VARIATION RATES										PROJECT TOTAL
	I	II	III	IV	V	VI	VII	VIII	IX	X	
1. Past Medical Hx Documented	38%	41%	42%	46%	48%	66%	67%	74%	85%	100%	58%
2. Heart Exam Recorded	0%	10%	14%	14%	16%	21%	24%	29%	32%	47%	19%
3. Chest Wall or Lung Exam Noted	0%	5%	8%	9%	9%	10%	14%	16%	37%	42%	12%
4. Blood Pressure Recorded	0%	0%	0%	4%	5%	5%	5%	5%	12%	24%	6%
5. Subsequent Diag. or Follow-up Noted	5%	9%	14%	19%	21%	21%	23%	42%	42%	47%	21%

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AMCRO DISPLAY OF ELEMENTS OCCURRENCE
STUDY: Chest Pain Study
SITE: ______ Total PTS: _______ Male: ______ Female: ______

Code	Element of Care	% Pts Proc. Occurred	% Pts > (X) Time	Frequency Per 100 Vis.	 Per Pt Yr.	% Pts Non-Occurrence
003	Systolic B. P.		---		-----	
004	Diastolic B. P.		---		-----	
006	EKG Order			-----	-----	
505	EKG Done			-----	-----	
010	Chest X-Ray Order		-----	-----	-----	
510	Chest X-Ray Done		-----	-----	-----	
010	Order 4 hour pp Blood Sugar		-----	-----	-----	
517	Results 4 hour pp Blood Sugar		-----	-----	-----	
019	Order Glucose Tolerance Test		-----	-----	-----	
519	Results Glucose Tolerance Test		-----	-----	-----	
024	Cholesterol Order		-----	-----	-----	
524	Cholesterol Done		-----	-----	-----	
026	Urinalysis Order		-----	-----	-----	
526	Urinalysis Done		-----	-----	-----	
027	CBC Order		-----	-----	-----	
527	Hemoglobin Done		-----	-----	-----	
029	Fasting Blood Sugar Order		-----	-----	-----	
529	Fasting Blood Sugar Done		-----	-----	-----	
030	2 hr Blood Sugar Order		-----	-----	-----	
530	2 hr Blood Sugar Done		-----	-----	-----	
031	Random Blood Sugar Order		-----	-----	-----	
531	Random Blood Sugar Done		-----	-----	-----	
049	Heart Exam		-----		-----	
053	Family History		-----	-----	-----	
076	Past Medical Hx		-----	-----	-----	
077	Chest Wall or Lung Exam		-----		-----	

AMCRO DISPLAY OF ELEMENTS OCCURRENCE

STUDY: Chest Pain

SITE: ______ Total PTS: ______ Male: ______ Female: ______

Code	Element of Care	% Pts Proc. Occurred	% Pts > (X) Time	Frequency Per 100 Vis.	Frequency Per Pt Yr.	% Pts Non-Occurrence
078	History of Previous attack Chest Pain		-----	-----	-----	
090	Screening Panel Order		-----	-----	-----	
107	Ataractics or Tranquillizers		-----	-----	-----	
108	Sedatives		-----	-----	-----	
113	Skeletal Muscle Relaxant		-----	-----	-----	
114	Salycilates		-----	-----	-----	
115	Analgesics		-----	-----	-----	
116	Narcotics		-----	-----	-----	
117	Phenyl Butazone		-----	-----	-----	
118	Indomethacin		-----	-----	-----	
203	Subsequent Diagnosis		-----	-----	-----	
600	Office Visit		-----	-----	-----	
650	Telephone Call			-----	-----	
655	E. R. Visit			-----	-----	
675	House Call			-----	-----	
*801	Medical Consult (W)		-----	-----	-----	
811	Medical Consult (N)		-----	-----	-----	
802	Hospitalized (W)		-----	-----	-----	
812	Hospitalized (N)		-----	-----	-----	
	* Documentation in progress notes of referral					
	No Documentation in progress notes of referral					

NMCRO RANKING OF OCCURRENCE OF ELEMENT DISPLAY

SITE #__________

STUDY Chest Pain TOTAL PTS. IN STUDY 483 PTS. THIS SITE______ Page 1 of 3

This display deals with the range (from low to high) of the percentage of patients from all practice sites for whom the indicated element of care occurred. The average and median percentages of occurrence for each element is displayed for comparison. The actual percentage of patients for whom this element occurred at this practice site is circled.

Element of Care/Code	RANKING (Low to High) I	II	III	IV	V	VI	VII	VIII	IX	X	Mean	Median
Systolic B. P.	86	88	95	96	96	98	98	100	100	100	96	97
Diastolic B. P.	86	88	95	96	96	98	98	100	100	100	96	97
EKG Order	32	33	41	42	49	51	52	53	60	75	49	50
EKG Done	26	39	47	48	58	59	61	66	67	70	54	58.5
Chest X-Ray Order	17	18	29	32	33	34	37	39	48	49	34	33.5
Chest X-Ray Done	8	20	20	26	30	37	40	47	54	67	35	33.5
Order 4 hour pp Blood Sugar	0	0	0	0	0	0	0	0	0	5	1	0
Results 4 hour pp Blood Sugar	0	0	0	0	0	0	0	0	0	2	0	0
Order Glucose Tolerance Test	0	0	0	0	0	0	0	0	1	4	1	0
Results Glucose Tolerance Test	0	0	0	0	0	0	0	0	0	2	0	0
Cholesterol Order	0	0	0	0	0	0	1	1	2	8	1	0
Cholesterol Done	10	16	19	19	23	23	24	32	49	58	27	23
Urinalysis Order	4	5	9	10	12	16	17	20	21	23	14	14
Urinalysis Done	5	20	26	29	33	36	37	37	39	50	31	34.5
CBC Order	8	16	20	22	22	26	27	37	38	42	26	24
Hemoglobin Done	17	24	26	26	32	34	37	48	53	58	36	33
FBS Order	0	5	5	5	6	7	8	8	11	19	7	6.5

STUDY Chest Pain

ANCRO RANKING OF OCCURRENCE OF ELEMENT DISPLAY SITE #

	RANKING (Low to High)											
ement of Care and Code	I	II	III	IV	V	VI	VII	VIII	IX	X	Mean	Median
FBS Results	3	5	5	5	7	7	7	8	11	51	11	7
2 hr Blood Sugar Ord	0	0	0	0	0	1	2	4	5	5	2	0.5
2 hr Blood Sug. Res.	0	0	0	0	0	0	1	2	4	5	1	0
Random B S Order	0	2	3	4	4	5	8	9	10	14	6	4.5
Random B S Results	4	14	17	21	22	27	29	30	32	42	24	24.5
Heart Exam	63	74	76	76	85	87	88	90	93	100	83	86
Family History	5	21	22	29	34	35	46	62	65	67	39	34.5
Past Medical History	0	15	26	33	34	52	53	58	59	62	39	43
Chest Wall - Lung Examination	74	79	84	90	92	93	94	95	100	100	90	92.5
Hx. Previous Attack Chest Pain	29	41	42	52	66	71	74	78	86	100	64	68.5
Screening Panel Ord.	12	15	15	16	24	28	33	34	37	51	27	26
Ataractics or Tranquillizers	5	16	22	25	27	27	33	37	47	66	31	27
Sedatives	0	0	0	2	2	3	5	8	14	32	7	2.5
Skeletal Muscle Relaxant	0	0	1	1	2	2	5	5	8	15	4	2
Salycilates	8	10	12	15	16	16	21	23	27	38	19	16
Analgesics	0	8	12	18	20	21	26	26	30	32	19	20.5
Narcotics	0	1	2	3	5	7	7	8	10	12	6	6
Phenyl Butazones	0	0	0	0	0	0	1	2	2	2	1	0
Indomethacin	0	0	2	2	2	5	6	7	7	11	4	3.5
Subsequent Diagnosis	8	35	58	68	68	81	81	82	85	90	66	75

STUDY Chest Pain

AMCRO RANKING OF OCCURRENCE OF ELEMENT DISPLAY SITE #

	RANKING (Low to High)											
Element of Care and Code	I	II	III	IV	V	VI	VII	VIII	IX	X	Mean	Median
Office Visit	99	100	100	100	100	100	100	100	100	100	100	100
Telephone Call	4	5	8	11	16	27	28	29	45	63	24	21.5
E. R. Visit	0	0	0	0	1	2	2	3	11	14	3	1.5
House Call	0	0	0	0	0	2	2	2	4	6	2	1
*Medical Consult (W)	0	5	8	14	14	18	20	21	24	25	15	16
Medical Consult (N)	0	0	0	0	1	2	5	11	16	17	5	1.5
Hospitalized (W)	0	0	3	5	5	8	15	15	18	24	9	6.5
Hospitalized (N)	0	0	0	0	0	2	3	3	7	14	3	1

* Documentation in progress notes of referral (W)

No Documentation in progress notes of referral (N)

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